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PROGNOSIS IN CARDIAC INSUFFICIENCIES.*

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The past ten years has witnessed a marked revision in our understanding of cardiac diseases. Many of the obscure symptoms and signs of cardiac incompetency have in the light of recent researches been fully explained, and our knowledge of hitherto inexplicable conditions has been so enhanced that we must needs consider each patient from a totally different point of view. The physician has long been prone to lay too much stress upon the findings of auscultation. It is so simple a matter to hear a murmur, that he has neglected palpation and percussion, and disregarded, in a measure, abnormal pulsations and arhythmias. Studies in the last decade upon the physiology and embryology of the heart have led us into new fields, and fortunately we are turning our energies to the solution of problems that these newer discoveries disclose.

This clearer knowledge that we have gained of diseases of the heart has had one salutary effect, namely, the placing of the essential feature of prognosis on a more substantial basis. We can safely say that in no field of internal medicine are more inaccurate diagnoses made and more unsatisfactory prognoses given. Not alone do these reflect on the attendant, but the harm that such advice has done to patients is incalculable. Not infrequently has the whole course of an individual's life been so changed as to unalterably affect a promising future. I have in mind now a young woman of 28 who from the age of 16 to 20 years was obliged to lead a sedentary life because two physicians had found a murmur which, the parents were led to believe, presaged an early death, if their daughter were allowed more than the ordinary exertion of walking.

In 1907 this young woman, whose boundless energy had led her into literary pursuits that overtaxed her mental strength, consulted me. I failed to discover the murmur, but I did get a history suggestive of a severe anemia from the age of sixteen to eighteen. I found in addition an undersized, undernourished girl, of unusually keen mentality. She was easily exhausted now upon mental effort, and lived in such fear of what might happen to her, should she overtax her strength, that the ordinary tests to determine how the heart responded to exertion disturbed her greatly. Suffice to say I changed the mode of this young

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woman's life, and by impressing upon her the fact that her's was a healthy heart, I gradually guided her into fields of physical activity, that have in the past two years changed her into a robust, athletic woman.

Improper prognoses are daily affecting individuals in other ways. Long courses of treatment are unnecessarily imposed at great sacrifice and expense. A fruit vendor, aged 52, whose little business had netted him and his family a comfortable livelihood for many years, had a mitral systolic murmur with edema of ankles, dyspnea and cough. He was told he had "a leakage of the heart," and advised to sell out his little route and change climate. Four months later I saw him, a discouraged, disheartened subject. His cough, he told me, was not improved, he was quite dyspneic and the incompetency was worse. The poor man and his family were now subjects of charity. I need hardly tell you what rest and proper treatment did for this man, in surroundings far less favorable than he could afford six months before. But the former means of earning his living were gone. With a proper knowledge of his limitations for exertion, he began a less strenuous pursuit of clerking in a grocery, and though he occasionaly gets short of breath on lifting or walking too rapidly, he is able to care for his family in a meager fashion, and will be spared for many years of usefulness.

Permit me to allude for a moment to the usual life insurance blank. In this the examiner is called upon to describe those conditions that make for definite prognosis. But what do the questions on most of them mean? "What is the pulse rate standing?" "What sitting?" "Do you find any evidence of past or present disease of the heart?" That is not all. A fully compensated regurgitation, perfectly compatible with health and longevity advances the rate from 10 to 20 years. Again I have heard physicians tell applicants who showed an insignificant extra-systole, to rest up for a few days or stop smoking, and return so that they might pass them —I presume with a clear conscience.

The laity stand in horror of any condition that suggests disease of the heart, for it brings to their mind fear of sudden death. It is for this reason more than any other that we are consulted, when an individual has reason to suspect any cardiac affection. Hence I am entering this subject with some insistency and detail, for I am certain that we must feel the responsibility that rests with each of us in making a prognosis.

I shall consider in this discussion those insufficiencies that result from purely intrinsic causes.

Let me say at the outset that no accurate prognosis can be made from the bronchitis, edema, dyspnea, cyanosis, etc., alone. We must consider the habits and previous family history of the individual, and the effect prolonged incompetency has had on the bloodvessels, lungs, liver, gastrointestinal tract and finally on the mental attitude of the patient. These are the general features that appear in almost every case in a more or less pronounced fashion. Yet the true guide must always be the manner in which the heart responds to increased activity. In absolute incompetency this can be measured by the amount of reserve force demonstrated by the heart, when placed under ideal conditions of rest.

But we should go one step further before giving a prognosis. We must analyze each function of the heart so far as possible, and determine how completely this or that property has been lost or destroyed, and what are its individual powers of recuperation.

They are best divided into those heads that have to do with the normal functions of heart beat. Hence we may have (1) failure of tonicity of heart muscle; (2) failure of conductivity; (3) loss of contractility; (4) improper production of

rhythmic stimuli; (5) abnormal excitability of the heart.

There is a group of cardiac conditions occurring frequently in young people, characterized by irregularity of the heart during excitement. It is seen after febrile conditions and also in more grave conditions, such as cerebral syphilis, and general tuberculosis. It is purely an abnormality in stimulus production, arising in the great veins and transmitted throughout the heart. It is without danger or significance.

Clinically, failure of tonicity is recognized in many ways. Enlargement of the heart and abnormal pulsations; symptoms produced by backing up of circulation on the venous side, and sensory symptoms localized to the precordial, pectoral, epigastric and left axillary regions. Marked failure in tonus of heart muscle as seen in extreme dilatation, does not necessarily presage dissolution. If the heart muscle takes care of the increased influx of blood with reasonable comfort to the patient, the outlook is good, for it means a sound heart muscle. The therapeutic test of digitalis is invaluable here, because if the heart does respond promptly to the drug, the prognosis is more favorable; if not, then the muscle is worn out and the prognosis serious.

The conducting medium of heart beat is the auricular-ventricular bundle of His. Lesions from the node down, cause a dissociation of ventricular beat, recognized by slow radial pulse or apical beat, and normal or rapid jugular pulsations. There may be all degrees of such incoordination, but, as a general rule, the severity depends upon the completeness of the block. In complete dissociation of beats, the outlook is grave and the frequency of syncopial attacks augments the danger. In milder cases where only an occasional stimulus fails to pass through, the condition is perfectly compatible with years of health. I have such an instance now in my care, where a cardiosclerosis is the cause of a mild block. Exertion sometimes brings on attacks of temporary giddiness, and is a warning that only a quiet routine will maintain comfort. In these cases we have a distinct warning against the use of digitalis which seriously disturbs the conductivity. I have lately seen the heart of such a case, where I am certain that administration of this drug brought about an untimely end.

No cardiac sign gives us as many clues for making a correct prognosis, when properly considered along with other symptoms, as abnormal contractility. It is a sign often overlooked, because it occurs without any evidence of dilatation, dropsy or dyspnea. Exhaustion of contractility is one of the earliest features of lessening of the heart's reserve force. It either means that the healthy heart is working against an abnormal load or that the normal resistance of the blood in the chambers of the heart is too much for a weakening muscle to take care of. The signs of this form of failure are manifested in two ways. Sensory symptoms, such as angina pectoris and the associated phenomena that go with it, are frequent signs. More often these patients complain of headache, breathlessness, extreme prostration, sense of fulness in the epigastrium and finally tumultuous beating of the heart. These cases usually present remarkable arhythmia known as pulsus alternans, in which a strong beat is followed by a weaker one with normal time interval. When failure of this function begins, it is often hard to define. It may progress to a marked degree without any fall of blood pressure, without cardiac dilatation, or without any changes except those already mentioned. But I do not know of a single case in which I have observed it, that has ever recovered to such an extent as to enjoy the freedom of ordinary activities. In using the signs of failure of contractility further in prognosis, the underlying conditions must be perfectly understood. In the acute infectious

diseases it is a sign of the utmost gravity. Occurring in the course of valvular insufficiencies, with good heart muscle, the immediate prognosis is favorable, if rest can be procured. In arteriosclerosis it offers no hope, because it means that the muscle has degenerated beyond repair.

I have left the discussion of abnormal stimulus production to the end. That form that has to do with the production of extra-systole may be quickly dismissed with the remark that it should never be the cause for alarm. In a large number of cases it disappears. In the few where it persists other signs of failure of cardiac reserve force form the basis for the prognosis. There is a form, however, of abnormal stimulus production that is of a more serious import. It is that type in which contraction no longer begins in the great veins, but originates in a node in the auriculo-ventricular septum or in the ventricle itself. It is clear that in such a case the rhythm is seriously disturbed, because the auricle and ventricle beat in unison. The prognosis in these cases depends upon the degree to which the general circulation is disturbed, for it is evident that there will be much damming back of the circulation upon the venous side. In young individuals it usually rights itself. In elderly subjects the outlook is more grave, for it not infrequently goes on to a persistent tachycardia resulting in failure of tonicity. There is, however, some factor at work in these conditions that we do not understand and which has led at times to mistaken prognoses.

We have, therefore, four factors that must always be considered in our prognostications: tonicity, contractility, conductivity, and production of rhythmic stimuli. They all must be investigated in connection with gross signs of incompetency, general condition of the patient and other anatomic lesions. All these, however, are guides which can only rightly be estimated when we have determined the responsive power of the heart itself to exertion and stimulation.

Adult Syphilis of the Lung.—Pelton of New York says that syphilis of the lung resembles tuberculosis or other lung diseases so closely that it is often not diagnosed. There are two types, catarrhal pneumonitis, in which there are in the alveoli a considerable number of large cellular elements; and interstitial pneumonitis, with thickening of the connective tissue framework of the lung, and infiltration of all the tissues. Gummatous tumors may also be developed. Sclerosis of irregular distribution is the usual lesion of lung syphilis. Bronchiectatic cavities form containing pus, or with necrotic and gangrenous walls. The *Spiracheta pallida* is rarely found in acquired lung syphilis. Syphilis and tuberculosis of the lungs when found in the same subject do not affect one another. Diagnosis is almost impossible. When syphilis is engrafted on tuberculosis the latter becomes more severe and rapid. When tuberculosis appears early in syphilis the course is rapid and prognosis bad. When tuberculosis is engrafted on an old syphilis the slow, afebrile type is developed. Absence of tubercle bacilli in the sputum is a valuable negative point. Syphilis is unilateral, circumscribed, and has no predilection for the apices. The general health is not easily affected, evolution being slow. The presence of syphilitic lesions in other organs is a valuable sign. The author gives the history of a case which extended over about four years.—*Medical Record*, January 22, 1910.

Complete health may justly be regarded almost as an accident, a perishable possession of most uncertain tenure, to be jealously safe-guarded and enjoyed in a rational way while it lasts.—*N. Y. Med. Journal*, November 6.

UTERINE FIBROIDS*

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In our contention with any particular disease it is well that we occasionally pause, review our work and that of others and attempt to draw certain conclusions based upon increased experience relative to the disease in question. The subject of fibroids is, of course, one of the oldest in gynecology and it is only because of the reason given above, its general interest and the fact that certain points apparently admit of some discussion, that I venture to bring it before you today. With any disease that is not necessarily fatal, but in which the bearer may live for years without serious disability, differences of opinion as to treatment are bound to hold. Still, we may note that there has been a gradual and general acceptance of many ideas formerly much debated—for instance, the question of radical removal or so-called conservative or medical treatment. Today we may possibly discuss whether a certain case should be operated or not, but it is generally admitted that no treatment is of any avail except operation. We either operate or do nothing. I wish today to restrict the discussion to those points which have a more or less direct bearing on the treatment, and in doing so it may be well to review a few points in pathology.

Fibroids are no longer to be regarded as a comparatively harmless disease; they are benign only in the sense that they do not recur when removed. A glance at the possible complications that frequently follow in the course of their growth, puts them at once in the list of serious diseases. In a review of 2,274 cases operated by himself and others, Noble found complications which seriously threatened life or health in 1553, or 68 per cent. In my own list of 86 operated cases, there were present 51 (over one half) whose lives or good health were seriously threatened.

Pathologically we may classify uterine fibroids according to location.

First—Submucous fibroids which ordinarily are rapid in growth, but do not reach a large size—first, because they may be early extruded, and secondly, because they are peculiarly liable to infection. They are very apt to cause hemorrhage.

Second—Interstitial fibroids. They are very common, are usually associated with hypertrophy of the uterine wall and may attain a large size.

Third—Subperitoneal or subserous fibroids. They are very common, are often pedunculated, apt to obtain a large size and are not, when alone, apt to be associated with hemorrhage. Cervical myomata are very rare.

This is the classical classification and it sounds simple enough. Not so, however, the conditions found, for these growths present almost infinite variety in size, number, position and relationship with each other, the uterus, and all its surrounding parts. The study is one of never ceasing interest to the surgeon at the time of operation and in the laboratory. There is scarcely a characteristic of these growths that remains in any way constant; they vary in number from one to scores, in rap-

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idity of growth from the tumor that remains perfectly quiescent for years to that which in a few months fills the abdomen. In size they vary from those seen only with the microscope, to those presented in the literature—one by Stockard weighing 135 pounds, and one by Hunter of 140 pounds, the cadaver weighing but 95 pounds after removal of the fibroid. Kelly successfully removed one weighing 89 pounds. Those weighing ten pounds nowadays are unusual.

The influence and relationship of each tumor depend considerably upon its point of origin in the uterus and the presence of others. We will go far in explaining matters if we start with the simple conception that early in the history of each growth the uterine muscle attempts to expel it, the tumor gradually tending to pass toward the interior or exterior, that the uterus hypertrophies in proportion to the work demanded of it in accomplishing this. If this is completed the growth appears as a polyp in the uterine canal, or as a pedunculated external one. This attempt is often abortive or found incomplete, the growth being found surrounded by hypertrophied or perhaps subsequently atrophied muscle wall. The shape of the individual growth is influenced by pressure of other growths, of the uterus itself or its surrounding parts. The size, shape and position of the uterus itself is very often markedly influenced by fibroids. For example a growth springing from low down in its wall is apt to displace the bladder or strip the pelvic peritoneum from the pelvic wall, press upon the ureters, and is often very hard to remove. A fibroid uterus is often made fast in the pelvis by such peritoneum, and the blood supply is apt to be from multiple sources and difficult to control. A fibroid extruded between the broad ligaments pushes the uterus to the opposite side; likewise one in the anterior or posterior wall pushes the body in the opposite direction.

Again, we may note interesting facts connected with the blood supply. If the growth is well surrounded by uterine tissue any extra blood supply demanded is met by an increase in size of the four cardinal vessels; in a growth of this kind of 22 pounds weight, I found the uterines were as large as carotids. Let the tumor grow to any great size beneath the peritoneum, and it may readily derive part of its supply from enlarged vessels lying beneath this structure. If the growth becomes pedunculated and its pedicle encroached upon, or too small for its nourishment, it may become adherent to surrounding structures, new vessels being formed, or the omentum may attach itself to it and maintain its nutrition, the vessels increasing in size and the omental fat disappearing. It is possible for a fibroid to completely detach itself from the uterus in this way—the so-called parasitic fibroids. When attached to the omentum, the growth is apt to be rapid. The rapidity of growth is usually indicated by the amount of fibrous tissue found, the softer, more vascular growths being the most rapid. The climacteric may result in a cessation of growth, but can by no means be depended upon to do so, as we know by common experience.

Aside from the great variation in gross appearance and relationship, fibroids present changes of several varieties within themselves.

You may have first such changes as are associated with a dimunition of the blood supply. The commonest is a simple atrophy in which the individual growth has become rather smaller, harder and contains but few vessels. This condition is very often found in fibroids removed from uteri after the climacteric. They may also occur before that time. To this simple atrophy may be added calcification. Such tumors are extremely hard and may, if infected, cause suppuration in their neighborhood.

Hyaline degeneration is present in very many myomata and may even be seen macroscopically in a considerable number of specimens. Fatty degeneration, myomatous and amyloid degeneration are also occasionally to be met with. We may also have a simple maceration due to a disturbance of the blood supply, although such a condition is very apt to be promptly followed by a suppuration. Simple inflammation, due to infection, necrosis, gangrene and simple edema, due to impairment of the circulation, are not rare sequelae. I shall not speak of the adenomyoma more than to say that they are usually derived from the uterine glands, but some are found—the so-called Von Recklinghausen tumors—which are derived from remnants of the Wolffian duct. Teleangiectatic or lymphangiectactic tumors, the latter not uncommon, are also described. Besides these we have malignant diseases, either associated with, or the direct outcome of the presence of fibroids. Winter has estimated that as high as 4% of fibroids would be found to be sarcomatous, if careful examinations were made. In Noble's statistics of 2,274 cases of fibroid, there were 2% sarcomatous. Out of 86 cases, I have had no instance of this, though I have seen several which have been recognized either before or after death as sarcomas of the uterus.

It is doubtful whether cancer of the cervix is ever caused by fibroids, but cancer of the fundus, associated with fibroids, is 27 times as common as when not so associated. This is commonly supposed to be due to direct impingement of the fibroid against the opposite uterine wall and the consequent irritation. Altogether cancer of the body is found with fibroids in about 1.5% of the latter. (Noble). Conservatively estimated it may be said that malignant disease occurs in fibroid uteri in at least 3%, and since this is higher than the mortality of uncomplicated cases that are operated, it in itself constitutes a valid reason for removal of practically every fibroid.

But this is not all: We may have more or less serious changes external to the uterus. Infections of the appendages are found very frequently with fibroids, also peritoneal adhesions, due to the irritation of the fibroid, or inflammatory changes within them. We may also have pressure upon the ureters, upon the bowel or the bladder. The discomfort caused by the carrying of a large, heavy abdominal tumor may amount to actual invalidism. Olshausen's figures show that about 30% of these women are sterile. If they do become pregnant, they not infrequently suffer serious consequences, requiring operation.

My own experience covers 86 operated cases. Of these, the principal indication for operation was the presence of the fibroid in 59 cases. In the remaining 27, the removal of the fibroid was more or less incidental, there being more urgent reasons for operation. Out of the 86 cases, there were 14 myomectomies, 8 removals of polypi, and 64 hysterectomies. Of the 86 cases, 6 died as the result of operation, a comparatively high mortality rate. Of these 6 deaths, three were in my earlier experience and should be charged directly to it and the less perfect technic of ten or twelve years ago. The fourth patient, with an extremely difficult tumor to remove, had also a degenerated heart muscle. She died four or five days after the operation. The fifth case, of rather recent experience, from whom we removed a suppurating fibroid, went home from the hospital apparently well, developed temperature, neglected to call her doctor, and died of sepsis several weeks afterward. An examination showed an extensive suppuration of the pelvic connective tissue. The sixth case was that of a woman of 65 from whom we removed a large fibroid, simply to get at the underlying tumor, which

proved to be a carcinoma of the bowel. She died shortly after operation. This might well be excluded from the list.

A review of my own cases and those of many others makes it safe to say that the mortality in simple or moderately complicated cases of fibroid of the uterus would be scarcely more than 1% or 2% —a higher mortality being due to extremely unusual or uncontrollable conditions.

Treatment.

In view of the evidence that is accumulating showing the marked frequency of serious complications, I believe we must abandon the older classical teaching, which told us to let a fibroid uterus that was causing no symptoms alone, and select only for operation those that were producing disturbance. I believe that radical removal of the growth should be by all means the rule and non-removal the exception. I can conceive hesitating in the case of a very young woman in the child-bearing age with a very small symptomless tumor, but such cases do not come to us often. The rule should be removal.

As may be surmised from the above statistics, my own preference lies rather toward hysterectomy in the majority of cases of uterine fibroid and yet myomectomy, I believe, has a distinct and useful place among these operations. The principal reason for this is the matter of child-bearing. The younger the woman, the more urgent the need of conservatism. If a woman has already borne a number of children the reason for conservatism comes correspondingly less urgently. Conservatism for conservatism's sake has, it seems to me, but little place in the ever recurring argument. I have not considered it of any particular advantage to try to save a uterus in a woman of 40 or over, nor in others somewhat younger, if it were to be done with the possible risk of not curing her of her disease. It is conceded that except in the simplest cases, myomectomy is fully as dangerous an operation as hysterectomy. Certainly in good hands there could not be much variation in mortality one way or the other.

During the year that has passed since the International Congress on Tuberculosis met at Washington, one institution or organization for the treatment or prevention of tuberculosis has been established every day, Sundays and holidays included, according to a bulletin of the National Association for the Study and Prevention of Tuberculosis. Fifteen new beds in hospitals or sanatoria have been provided also for every day of the year.

A year ago the rate of increase was one organization or institution every other day, only one-half as fast as now. Less than a year ago there were 40 consumptives for every hospital bed provided. To-day the number has been reduced to 30. Nearly 20,000 beds are now provided in institutions for the treatment of consumption, an increase of over 5,500. The number of special tuberculosis dispensaries in the United States has more than doubled, the number of anti-tuberculosis associations has increased 68%, and the number of hospitals and sanatoria 43%.

In one branch of anti-tuberculosis work, particularly emphasized by the International Congress, a signal advance has been made, that is, in the provision of hospital accommodations for advanced cases. In all parts of the country, state and municipal authorities have been urged to provide hospitals for dangerous cases of tuberculosis, with the result that over 1,000 beds have been established in the past year. At the present time there are, however, only 6,000 beds, and 75,000 advanced cases which ought to be in hospitals.

URINARY INFECTIONS, TREATMENT BY INOCULATIONS*

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Much interest was aroused in the profession a few years ago by the announcement of Wright of London, of the discovery of opsonins and the effect upon the blood of injections of sterilized bacteria.

The laboratories immediately became active in this work and have given us much valuable information. To the average practitioner, however, far from laboratories, the theory has continued to be a beautiful dream, perhaps, but not regarded as of practical use to him.

The following editorial from the *Journal of the American Medical Association,* March, 1907, fairly expresses the views of intelligent, general practitioners upon the availability of vaccine therapy. "It must be borne in mind that Wright bases the treatment on the consideration that in many localized chronic infections, bacterial products may fail to reach the circulating blood in sufficient quantities and at proper intervals to stimulate adequately the machinery of immunization or self healing, and that it is in order to supply the necessary stimuli in proper doses that sterile vaccines, prepared from the particular microbe causing the infection in question are injected. Hence it becomes absolutely necessary that an exact etiological diagnosis be made in all affections that it is proposed to treat with specific vaccine therapy. In the next place, in order that the vaccine may be the one most suited for the individual case it is regarded as highly desirable and even essential that vaccine be prepared from the particular strain causing the infection. This involves the isolation in pure cultures of the bacteria in question, the preparation therefrom of sterile potent vaccines, the proper dose of which is to be determined by special methods. Finally, in order to determine the immediate effect of the vaccine and to interspace the injections properly, it is necessary that the way in which the body reacts to the combined effects of the injections and the infection be tested from time to time. This is now done by determination of the opsonic index, a procedure that requires special facilities, some skill and much time. It is evident for the reasons briefly outlined, vaccine therapy, for the present, must be delegated to specially trained persons with adequate facilities, such as may be supplied in connection with laboratories."

The writer might have added that the patients would also have to be sent to the immediate vicinity of the laboratory, for in no other way could the opsonic index be taken.

It soon became evident that this means of treatment would not be available to the greater mass of our people if the opsonic index were held to be an essential feature of the procedure and so experiments were soon made to ascertain if reliance could not be placed upon the symptoms presented by the patients. I find the following conclusions of distinguished clinicians:

"Opsonic index possesses very little value as a guide to the administration of vaccine," Barker and Cole, of Johns Hopkins.

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"The difficulties of obtaining an accurate index are great; even Wright himself admits that the careful observation of the clinical features of a disease is as good an indication for vaccination as is the opsonic index," Dr. M. H. Parks, Association of American Physicians, Washington, May, 1907.

The aid of the laboratory is necessary as a matter of course, but much time and expense are saved if the index be omitted. The suspected secretion may be sent to the laboratory under proper precautions, bacteriological diagnosis made, and vaccines prepared without moving the patient from his home at all. Experience has demonstrated that the germs causing infection most frequently have a great many strains indistinguishable in the laboratory from one another, but producing many variations in symptoms in the patients, and presenting wide variations in dosage. For this reason it is absolutely necessary in order to succeed in the use of this treatment to make use of homologous vaccines. "Strains of bacteria vary considerably, I believe, from my experience, in the reaction they produce, also individuals vary in susceptibility, some being quite susceptible, others relatively immune," personal letter from Dr. D. J. Davis, Presbyterian Hospital, Chicago.

This paper is intended to be a clinical discussion of the subject without reference to laboratory details. Our laboratory work has been done at the laboratory of Mercy Hospital under the direction of Dr. A. A. Spoor. Our first work was in cases of urinary infection proper, when the urine contained pus and thereby suggested the presence of infection. We soon found cases of infection elsewhere in the body in which the urine was normal, chemically and microscopically, and yet the infecting germ was obtained in pure culture from this apparently normal urine. Our interest was aroused by this discovery and a search of available literature failed to find any reference to the subject. We commenced making cultures of the urine in all cases of known infections and so far have always obtained cultures of the infecting organism.

This is a very important point in the diagnosis of infectious diseases if further investigation should prove it reliable. It is difficult to get blood for culture and even in severe general infections it is sometimes difficult to obtain free growths from the blood. Our experience thus far indicates that disease germs are generally eliminated from the body through the urine, that in the process of elimination the kidneys may be irritated and finally inflamed and the seeds planted, by a passing infection, for subsequent chronic kidney disease, that in many cases the germs are eliminated through the kidneys without causing any apparent irritation in these organs. A case of general sepsis of severe character came to my notice in consultation. A great many inflamed nodules existed upon various portions of the body, some of them were suppurating. Urine was obtained with a catheter and some of the pus was obtained directly from one of the abscesses. Pure culture of the staphylococcus aureus was obtained from both the pus and the urine. The urine was chemically and microscopically normal.

Regarding dosage we have found it unnecessary to produce general reactions. We have followed the dosage used by Dr. Billings and his associates in Chicago. Many writers speak of doses of from one to fifty millions. We have never seen any effects from such dose. We commence with a hundred million bacilli and three hundred million cocci. If no local redness or soreness is produced, in two days we give a larger dose. When the dose producing local irritation is obtained we continue that dose every five days until no

effect is produced by it, when we again increase the dosage which oftentimes reaches one or two billions. In a limited experience in acute cases larger doses have been tolerated than in the chronic ones.

While the theory of vaccine therapy heretofore promulgated indicated that it is specially applicable in chronic infections, yet a few reports are beginning to appear in the journals of its successful use in acute general sepsis. My experience has been limited to two cases, one of colon infection, the other of streptococcus.

Dr. G. Martyn of Los Angeles, Cal., reports an interesting case in the *Journal of the American Medical Association,* Vol. 50, page 362, of general septicemia due to the streptococcus. Cultures were made from uterine scrapings and from blood drawn from the median basilic vein. From the scrapings a mixed growth of staphylococci and streptococci was obtained and from blood drawn before a chill a small growth and from that drawn after a chill a luxuriant growth of streptococci. From the last culture the vaccines were made. Several doses of antistreptococcic serum were given while the bacteriological investigation was taking place, without modifying the patient's symptoms.

The opsonic index was taken in this case and the findings correspond very closely with the symptoms. The first dose of vaccines was given at 9:30 A. M., November 3, 1907, the patient having a temperature of 104°; pulse flickering; extremities cold; color dusky with hectic patches on cheeks; opsonic index 0.4. By evening the temperature had fallen to 100.° and the index was 1.2. The next day the index was 2.0. On the fifth the index dropped to 0.9 and the patient's condition was again unsatisfactory. Another dose of vaccines was given, the index dropped to 0.7 and the patient's temperature went up with development of other grave symptoms. A third and larger dose was given and by midnight of the 6th the temperature had fallen to 99.8°. On the 7th the index had risen to 1.1 and the average temperature of the day was 100°. From that time on the index remained high and the patient made uninterrupted progress to recovery.

Mr first case of acute infection was in April, 1909.

Mrs. H., visited in consultation. Had given birth to a child four weeks before my visit. One week after child birth, commenced having rigors and fever. Rigors had been a daily occurrence for three weeks and her temperature had not been below 103°. I did a thorough curettage but found nothing that appeared to be responsible for the continued sepsis. Her general condition was bad and her mental condition was dull and despondent. Scrapings from her uterus produced upon culture a few scattering colonies of staphylococci. Her urine was loaded with pus, casts and a trace of albumen; culture gave a luxuriant growth of colon bacilli. Two days later vaccine was given, the temperature at the time being 103°. A few hours afterwards she complained of a strong salty taste in her mouth. Her temperature fell to normal during the day, the fall being attended with a profuse perspiration. The temperature remained normal for three days and all her symptoms improved. Another dose of vaccines was given, which was followed by general reaction, after which the temperature again became normal. Subsequently, she had chills and fever occasionally and was brought to the hospital. We treated her with vaccines every five days, the reaction after dosage becoming gradually less, the urine steadily improving in appearance until the first of July, when only a trace of pus could be discerned and a few scattering colonies of bacilli were obtained upon culture of the urine.

My second case was one of streptococcic infection and illustrates that in general sepsis the infecting organism may be obtained in the urine without evidence of urinary infection being present. Mrs. W. had a recurring nodule removed from her chest wall together with the sheaths of the pectoralis muscles. The operation was done August 7th, and six days later, August 13th, she had chilly sensations and her

temperature reached 103.5°. The previous six days had been normal and the wound had healed very nicely. Although there was no evidence of infection about the wound a portion of it was opened for safety. A red flush appeared upon the skin of the thorax resembling, but not identical in appearance, with erysipelas. The flush spread gradually around the whole trunk. It was the color of erythema, elevated and moderately sensitive to touch. With each occurrence of high temperature there was an exacerbation of the eruption. August 16th, her temperature reached 104° and 20 c.c. polyvalant antistreptococcic serum were administered, a sample of urine was also taken and culture started. August 17th, 20 c.c. of serum were given in the morning, temperature went up during the day and reached 105.2° at 5 p. m. Culture revealed a luxuriant growth of streptococci; urine contained a few pus cells otherwise normal. Vaccine made and at 8 p. m. half a billion sterilized germs were given; no reaction followed at point of injection. August 18th, 8 a. m., temperature 101.6°; 7 p. m., 104°; August 19th, 6 a. m., 101.8°. One billion germs were injected; slight local reaction followed. Six p. m., temperature 102.4°; August 20th, 21st and 22nd, the temperature was normal all of the time, except at 6 p. m., August 22nd, when it reached 100.2°. August 23rd, 7 a. m., temperature 101°; vaccine given, one billion germs. Four p. m., highest temperature of day reached, 104.6°. No local reaction from vaccine. August 24th, morning temperature, 101.2°, highest temperature of 24 hours at 3 p. m., 103.2°. Patient's mental condition and general appearance much improved. August 25th, 7 a. m., 100°; 8 p. m., 99°. On the 26th and 27th temperature normal and patient feeling very well. On the 28th, morning temperature 98.4°, evening 103.8°, half a billion germs injected, no local reaction. August 29th, a. m., temperature 101.6°; evening 103.6°; one billion germs given, no local reaction. Accompanying this elevation of temperature there was an aggravation of the skin eruption. August 30th and 31st, temperature was normal and on the evening of August 31st, a half billion germs were injected. At this time the skin eruption had completely disappeared.

September 1st, a. m., temperature 98.9°; p. m., 103.6°.

September 2nd, a. m., temperature 99.6°; p. m., 102.6°.

September 3rd, a. m., temperature 100°; p. m., 102.6°. On the morning of September 3rd one and three-quarter billions sterilized germs were injected and urine was taken for culture. A slight local reaction followed this injection. September 4th, morning temperature 100°, evening 102.2°. Report from the laboratory was to the effect that no streptococci appeared in the culture, the only growth being two small colonies of staphylococci. Suspecting the staphylococci to be a contamination, a fresh specimen was obtained and cultures made on blood serum and agar and no growth appeared upon either media. Patient had been having normal evacuations from her bowels throughout her illness, but the appearance of a true erythema on September 3rd, suggested that possibly not enough elimination was taking place by that channel, so saturated solution of Rochelle salts was given and continued that day and the next until watery stools were produced. A large amount of waste matter passed away, after which the temperature became normal on September 5th, and so remained thereafter. It is apparent that the last range of temperature commencing September 1st, was not due to the original infection. It is difficult in acute cases to be sure that a given remedy has produced the change in the symptoms. I give the symptoms of this case and the treatment for what they may be worth and hope that in time a sufficient number of cases may be recorded to give us a basis for conclusions concerning the efficacy of the treatment.

Since February 15, 1909, 61 patients have been treated with vaccines prepared from cultures made at the Mercy Hospital laboratory. The majority of them I heard more or less about when they came under treatment and I have obtained reports from their attending physicians concerning the present condition of all of them. One, a case of general sepsis from the staphylococcus aureus, referred to previously in this paper, was *in extremis* when the vaccines were made. She was given two small doses without apparent effect upon her condition, which ended in death.

Of the other 60 patients, 23 are free of infection and fully restored to health. Thirty-seven are still taking treatment, all of whom are improving and those

who have been under treatment more than 30 days are symptomatically well. We do not pronounce them cured until two cultures made at intervals of two weeks are negative and until their symptoms are relieved and all pus has disappeared from the urine.

Nearly all these cases had urinary infection proper with pus in the urine, many of them having been under treatment of various kinds for years without receiving relief. Germs were found in nine other cases, which for various reasons did not receive treatment, and cultures have been made in many suspected cases in which no germs appeared. The infecting agent was represented as follows:

Bacillus coli	41 cases
Mixed baccillus coli and pyocyaneus	4 cases
Mixed bacillus coli and streptococcus	1 case
Mixed bacillus coli and micrococcus	3 cases
Bacillus pyocyaneus	8 cases
Streptococcus	1 case
Staphylococcus aureus	2 cases
Staphylococcus albus	1 case

A few of the more interesting cases occurring in my own practice I report in detail.

J. W. consulted me February 18th, 1909. He had been suffering from urinary infection for several years. In February, 1908, I operated upon him for prostatic abscess. For two years preceding that time I had seen him several times in consultation for prostatic and bladder irritation. The abscess of prostate soon healed after evacuating the pus, but the old bladder irritability continued, notwithstanding that he received daily bladder irrigations and other appropriate treatment. Last February urine analysis revealed large quantities of pus, hyaline and pus casts and some albumen. Culture resulted in a growth of bacillus coli communis. Vaccines were given every week and all other treatment was discontinued. Immediate improvement occurred in his symptoms and the condition of the urine. After the third dose of vaccine the urine appeared clear to the eye and in a few weeks the pus and casts had disappeared. July 17th culture resulted in a few small colonies of colon bacilli. September 9th, culture made and no growth appeared. Symptomatically he has been well since April.

C. D. F. consulted me in February last for nervous symptoms. His principal complaint was that he could not apply himself to his business, that when he attempted to work at his office he had a full feeling come in his head, which culminated in dizziness and severe pain through the top of the head. I treated him for two months without affording relief and without discovering the cause of his complaint. He had a drawn, anxious expression, was losing weight rapidly and gave the appearance of a man suffering from some serious malady. His urine showed a trace of pus and culture made on April 23rd produced a luxuriant growth of colon bacilli. Vaccines were prepared and given every five to seven days. Immediate improvement in his symptoms took place. He commenced looking after his business at once which was important to him at that time of the year and by July 3rd he was not only feeling perfectly well, but his urine was found to be sterile.

E. W., aged 15 years, a sediment in his urine attracted the attention of his parents in March, 1909, and a specimen was brought to me. It contained a decided trace of albumen. His diet was regulated, various drugs prescribed and the urine examined weekly for two months. No improvement occurred and no other abnormality was discovered in the urine until May when a single pus cast was found. Culture was then made and a free growth of bacillus pyocyaneus obtained. Vaccine was administered every five days, only local reactions being produced and the lad continued in school all of the time. No albumen could be detected after the third dose. The germs had disappeared by July 24th.

Mrs. H., admitted to hospital June 19, 1909. She had been sick for two months, at first having symptoms of intestinal obstruction followed by fever and then a general arthritis involving every joint in her body. At the time of admission to the hospital her joint disease had assumed a subacute type with frequent acute exacerbations in the phalangeal articulations. She came for baths, thinking that her trouble was rheumatic. Her urine had been frequently examined and always found free from pus, casts or albumen. Salicylates had no material effect upon the joint inflammation. Suspecting that her joint

trouble was due to an infection I had a culture made from the urine and a luxuriant growth of the bacillus pyocaneus was obtained. Vaccines were administered every five days and rapid improvement took place from the start. She was soon able to go home where her physician continued the treatment. August 15th, her urine was found to be sterile. In this case, obstinate constipation had been present for years. Only large doses of active cathartics had any effect. At the time she came under my care ten grains of phenolphthalein were required to move the bowels. After second dose of vaccines the bowels were quite regular without any assistance.

MIXED TOXINS IN THE TREATMENT OF SARCOMA, WITH REPORT OF A SUCCESSFUL CASE.*

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Detroit.

It is not my intention to review at length the views of Dr. William B. Coley regarding treatment of sarcoma, operable and inoperable, by hypodermic injections of mixed toxins of streptococcus erysipelatis and bacillus prodigiosus. I do, however, feel it my duty to place on record the results of this treatment which has certainly saved a limited number of patients from certain death. That sarcoma has in the past occasionally disappeared without treatment and more often following an attack of erysipelas is, I think, well authenticated, but that such cures have been frequent enough to engender much hope in a given case is hardly likely.

During the past 17 years, Coley has treated about 500 cases of inoperable sarcoma with the mixed toxins and feels quite sure that over 50 have been cured; while ten percent. may not seem at first a great ratio of cures following a given treatment, when one stops to think what the normal mortality is in such cases, one can not help but congratulate Dr. Coley upon these 50 individuals snatched from inevitable death as a direct result of his personal work. While Dr. Coley has been working on human beings, sarcomatous tumors have been made to disappear from dogs by the same treatment, until there can be no doubt that the toxins have an inhibitive and curative effect upon these malignant growths.

In an abstract of Coley's recent paper on the subject read before the Wayne County Medical Society, published in the June number of the *Detroit Medical Journal,* it is stated that as a result of the work at the Pasteur Institute, it was found that the erysipelas germ was much more virulent, if grown with the bacillus prodigiosus and this lead to the Coley formula, but aside from its effect upon the erysipelas germ, injections of the toxins of bacillus prodigiosus alone will cause sarcoma in dogs to disappear. Dr. Coley would on no account advise this treatment to the exclusion of operation, but after operation as a prophylactic against recurrence, in inoperable cases and in some cases of sarcoma of long bones where operation, even if successful, may so cripple as to be nearly as much to be dreaded as death. In his recent paper he reports a considerable success in this class of cases.

Hertel, of Copenhagen, thinks this treatment should certainly be employed in selected cases, and reports three instances, one of which, a recurrent sar-

coma of the testicle, was cured. In one of the other cases the symptoms of spinal tumor improved but did not disappear under treatment. After operation and section of the growth, it was decided that the tumor was a sarcoma which had so undergone degenerative changes that it was queried whether earlier resort to the Coley treatment would not have been completely successful, or possibly persistence in its use have resulted in the disappearance of all symptoms.

In the case to be reported I used the Coley fluid as prepared by Parke, Davis & Co., although Dr. Coley recommends the mixed toxins prepared by Dr. Martha Tracy of the Huntington Cancer Research Fund. I began with injection of one-quarter minim diluted in sterile water, and had no difficulty in soon finding the quantity sufficient to produce the reaction, characterized by a chill, fever, temperature about 101° to 104°, pulse 90 to 130, followed in a short time by return to normal with a feeling of well-being. The injections were given daily and the dose had to be increased, but not above 5 minims. After about three weeks' treatment, the patient left the hospital and daily injections were kept up for two weeks, then every second day for a month, and twice a week until about May 20, 1909. The patient, examined September 12th, appears to be perfectly well. At home as well as at the hospital, thermometer readings were taken every two hours after each injection and the size of injections governed thereby.

Following is the report of this case and attached is the pathological report of growth:

Henry L., aged 55, carpenter, was referred to me January 6, 1909, by Dr. Stanley G. Miner. His wife has tuberculosis and two sons have died with it. While his general health has been good, patient has noted an enlargement of right testis for 20 years. About a year ago the tunica vaginalis was tapped and a large quantity of serum withdrawn, leaving an infiltration in testicle or epididymus. Several times tapping has been resorted to, the last time a few weks ago, when the fluid was bloody and small in quantity. On examination, a smooth, oval tumor is found in the right scrotal sac, eight inches long, from which a very much thickened cord passes through the inguinal canal. The upper portion of the tumor seems hard and the lower third elastic. A diagnosis of probable sarcoma was made and immediate operation advised. At this time the temperature was 100° and pulse 96, showing probable septic absorption.

Operation January 7th, removing testicle and cord high up in the ring. At the bottom of the sac there was perhaps one ounce of clear serum and a testis which on section looked quite normal, but the main body of the tumor seemed to have its origin and growth in the head of the epididymis. It had a firm outside with a dirty necrotic fluid amounting to perhaps one-half ounce in the center. The pathologist reported, "marked hyperplasia of muscular coats with plentiful round celled infiltration, not malignant."

January 8th, temperature 100.6°; January 11th, temperature 99.8°. There was a fullness in region of cord that I thought to be probably due to infection and an ice bag was applied. On the 14th, I worked a director down into the scrotum which, while healing nicely on the surface, was not right. Temperature had gone down to normal and a hematoma was in my mind but only a few drops of bloody fluid were evacuated.

January 20th, Dr. McGraw saw the patient with me and we felt that we had to deal with a very malignant neoplasm which, now only thirteen days after first operation, had developed a firm growth as large as one's fist, seemingly three large masses fused together, one growing from the stump of the cord and two masses from the side of the cleaned-out scrotal sack.

January 22nd. Operated in the presence of Dr. S. G. Miner at St. Mary's Hospital, removing scrotal skin on the right side, freeing cord well up within the inner abdominal ring and keeping well without the new growth. The operative field looked beautifully clean and the only question was whether I should not have made a regular abdominal section and followed the cord as far as possible toward base of bladder.

January 23rd. Report from the pathologist,

"greater part of section shows a degenerative process. Small areas of large round sarcomatous cells are not infrequent. Vessel walls are mal-formed and thickened. Diagnosis, mixed sarcoma. Dr. Hoskins." Patient did well. Temperature remained normal, but on the 5th day there was undoubted recurrence within the scrotum and canal. Coley fluid, Parke, Davis & Co., one-quarter strength, was injected near swelling at 1 p. m., and temperature taken every two hours. At 4:20 p. m., temperature 99.2°, and at 6:20 p. m., tempertaure 100°.

January 29th, M. 1 injected near stump. Temperature 99.2°.

January 30th, M. 2 injected near stump at 11 a. m. and at 3 p. m. Temperature 103.6°, with chill lasting 24 minutes. Suffered nausea and vomited after the chill. At 4 p. m., pulse 136. 7 p. m., temperature 100.4°, pulse 120, respiration 28.

January 31st, M. 1.5 injected. Chill followed, lasting 25 minutes. Temperature 100°.

February 1st, M. 1 at 10 a. m. At 1:30 p. m., temperature 100°, pulse 96, 7 p. m., temperature 98.6°.

February 2nd, M. 1.25 injected. No reaction.

February 3rd, M. 2 injected. No reaction.

February 4th, M. 2.5 injected, at 2 p. m. At 4 p. m., temperature 100°, pulse 100.

February 5th, M. 3 injected. Temperature 100.2°.

February 6th, M. 3 injected. Temperature 99°, pulse 84.

February 7th, M. 4 injected at 11:40 a. m. At 1:45 temperature 104°, pulse 118, with chill lasting 45 minutes. At 8:15 p. m. temperature 99.2°.

Here it is noted that for the past four days there has certainly been no increase in tumor growth and there is a well marked feeling on the part of all observers that perhaps the growth is beginning to disappear.

February 8th, M. 4 injected.

February 9th, M. 5 injected at 10:30. At 4:30 p. m. temperature 101.4°, pulse 90, but no chill.

February 11th, M. 4 injected into tumor. Temperature went to 102°, pulse 90.

February 12th, M. 4 injected at 1:30. Temperature at 8 p. m. 103.6°, pulse 104. Slept well after 11:30 p. m.

The patient gradually improved and left the hospital February 17th. At that time improvement was marked. The case was a spectacular one. The rapid growth of the tumor was so unusual and the melting away of the growth so marked that some of those watching the progress of the case were willing to doubt its malignancy However, the final report of the pathologist, Dr. Carl Oakman, to whom the specimens were submitted, seems to show conclusively that we have treated a case of sarcoma with the Coley fluid and that at the present writing the patient is perfectly well.

PATHOLOGIST'S REPORT.

Tumor of Testicle. There is very little tissue characteristic of testis to be seen in any part of the specimen; a few sections show some faintly stained seminiferous tubules, but they are ill-defined, atrophic, and in the midst of necrotic tissue. The larger part of the specimen shows a diffuse growth, of mesoblastic type, very irregular in its disposition; the cellular elements are fusiform, and fibrillary or branching, with considerable intercellular matrix, giving it a myxomatous character. Several degenerating areas show pronounced mucoid deposit, staining deeply with hematoxylin. There are many aggregations of small round cells, especially around the blood vessels. The vascularity is not marked, and much of the blood supply is primitive in character. There are many areas of hemorrhage, in all stages of retrogressive change. Occasional bundles of smooth muscle are seen, mostly rather hyaline in appearance. There is widespread necrosis, in all stages, as a result of pressure or deficient vascularity.

The tumor appears to be of the myxo-sarcomatous variety.

(Signed) CARL S. OAKMAN.

Recurrent Tumor of the Groin. The most conspicuous feature of the material is hemorrhagic and fibrinous exudate in various stages of degeneration. The small portions which show recognizable tissue consist of closely packed thin, fusiform cells, arranged in interlacing bundles; these in some places resemble smooth muscle, and in others connective tissue; there is widespread necrosis and hyaline change, and poor blood supply, with numerous areas of pigmentation, evidently hematogenous. The excised portion includes a little striated muscle, which shows hyaline change and round cell infiltration. In the fleshier parts of the mass there are masses of round cells which appear sarcomatous in nature.

(Signed) CARL S. OAKMAN.

THE CIGAR VS. THE CIGARETTE.

A PRELIMINARY REPORT.*

FRANK CAMERON KINSEY, A. M., M. D.,
Three Rivers.

Allow me to preface this paper by explaining that I never was fortunate—or unfortunate enough to acquire the art of smoking in any of its forms and, therefore, that I went into the experiments which follow without any bias, prejudice or preconceived notions whatever on the subject. Having cleared my moral atmosphere in this manner, you might ask what occasion there is, after all, for investigating this subject. Precisely this: Talk to any intelligent, well educated man—sometimes even to a physician—about the contents and effects of cigarettes, and you will soon discover how little you actually know about them and what an astonishing fund of information he possesses. He will tell you that he has always understood, and believes it to be a fact, that cigarettes are drugged, and that the paper contains arsenic. (I may remark, parenthetically, that the recent anti-cigarette legislation in many of our states is based on just such arguments). This man you are conversing with may tell you of horrible deaths in boys and young men due to smoking cigarettes, and will present a fairly convincing picture of the evils trailing along after the cigarette habit, "especially from inhaling the stuff" he adds, taking a deep puff from his fat cigar and blowing it out through his nostrils. It was after just such a conversation with just such a man, an intelligent, well-educated high school teacher whose arguments I could not answer from my own knowledge, that I resolved to make some personal experiments along this most unpopular line. At some time in the future I hope to take up this work in greater detail, but I trust this preliminary paper may not be without interest.

In this research, my objects have been four: First, to find the total amount of crude nicotin contained in the tobacco of the ordinary domestic and Havana cigar, and compare it with the total nicotin content of the tobacco of cheap cigarettes; second, to find the amount of crude nicotin present in the smoke of cigars and cigarettes and compare it with the total amount present in the same tobacco; third, to determine the quantity of opium alkaloids or "dope" as it is called, contained in cheap cigarettes, if any is present; and fourth, to examine the various cigarette papers for arsenic and to determine the amount present, if any.

In our experiments to determine the total content of crude nicotin in any given tobacco, our method was as follows: The weighed quantity of cigar or cigarette was shredded, extracted with hot water, and evaporated to a small bulk without boiling. This was then mixed with calcium carbonate and distilled, (using the ordinary glass retort, Liebig condenser and receiver), over a glycerin bath at a temperature above 200 degrees C. (392°F.). The distillate was acidified with oxalic acid, evaporated to a small bulk and then decomposed with potassium hydroxid. When this product was extracted with ether, it

*Read at the Second Annual Meeting of the Third Councilor District, at Charlotte, October 7, 1909.

gave the amount of crude nicotin present in the tobacco used.

In our first tests we used 153 grains (9.935 G.) of tobacco as a standard, this corresponding to the weight of nine "Turkish Trophy" cigarettes or eight and one-half "Sweet Caporal" cigarettes.

Experiment No. 1.—This was on a five-cent domestic cigar whose composition, kindly furnished by the manufacturer, was as follows: Wrapper and binder, ¼ Connecticut, Havana seed; filler, ¼ Pennsylvania and ½ semi-Spanish, from Spanish seeds grown in Montgomery county, Ohio. The weight of one of these cigars was 107½ grains, consequently we used about 1 3/7 cigars in making up our weight of 153 grains. The tobacco was extracted with hot water, as outlined, treated with calcium carbonate, distilled, acidified with oxalic acid, reduced and extracted with ether, giving us nine drops or .6 G., corresponding to 5.8% of a substance which had the odor of stale tobacco and responded to all the tests for nicotin. This crude nicotin might have been purified by re-distillation in a stream of hydrogen, but, for our purposes of comparison, it was sufficiently pure. Nevertheless we tested this product for toxicity on animals, and found that four drops placed on the tongue of a six-pound tomcat killed the animal in 90 seconds. Almost instantly after the administration, his respiration increased to an uncountable rapidity. His nictitating membrane was drawn up, his salivary glands were stimulated (shown by the drooling of saliva), and he quickly lost his power of coördination. Clonic convulsions seized him, ending in a tetanic spasm in which he died. We noticed the so-called "cataleptic" stage in this cat, which has been previously reported in the frog. When the leg was drawn down and released, it at once returned to its former position. For some moments after his apparent death one could see fibrillary twitching of his muscles. From this experiment, we roughly estimated that the nicotin obtained was about 50% pure. Another tomcat weighing 8 pounds was tested by administering one drop by mouth, to observe the effect of less than the lethal dose. The stimulation of his salivary glands was almost instantaneous, and the abundant saliva flowing from his mouth must have washed away part of the drop. However, the respiration was increased to 132 at the end of the first minute, to 168 at the end of the second minute, 188 at the end of the third and 200 at the end of the fourth. His breathing was shallow and panting. Vomiting set in at the end of 40 seconds, the contraction extending throughout the intestinal tract, so that evacuation of the bowel occurred at the same time that he was vomiting fecal matter. He showed great muscular weakness and incoördination, staggering as he walked. His eyes were dilated at first, his nictitating membrane was drawn up and he stared straight before him with widely opened eyes. His heart action was too feeble to be perceived. This cat finally recovered from a dose which was possibly one-half drop of absorbed crude nicotin.

Experiment No. 2—153 grains of tobacco from Sweet Caporal cigarettes weighing 18 grains apiece, was extracted in the same manner as in experiment No. 1. This cigarette is stated by the manufacturers to be made from Virginia and Turkish tobacco, which is a mixture with a high nicotin content. Our tests showed 17 drops of crude nicotin were contained in the 8½ cigarettes making up this weight, or two drops to each cigarette, giving about 11% of crude nicotin.

Experiment No. 3—Two small five-cent cigars of "pure Havana" were next tested, weighing 54½ grains apiece, or 109 grains together. These were found

to contain 18 drops of crude nicotin, or 9 drops to each cigar. This experiment was repeated with the same result. From the high nicotin content and the low selling price, one might be led to believe that these "Havana" cigars originally came from Virginia.

Experiment No. 4—The same weight (109 gr.) of the tobacco from Turkish Trophy cigarettes was then extracted and yielded only nine drops of crude nicotin. As one Turkish Trophy cigarette weighs 17 gr., each cigarette contained only one drop of nicotin. Consequently, one of the little "Havana" cigars tested in our third experiment yielded as much crude nicotin as nine of the Turkish Trophy cigarettes.

We next tested tobacco smoke as it is drawn into the smoker's mouth. Occasionally you hear a medical man state that the nicotin in tobacco is destroyed in smoking it, so that none comes over in the smoke. This is a perennial echo from the prehistoric and unfortunate researches of Vohl and Eulenberg, who, in 1872, reported a series of otherwise masterly experiments on tobacco smoke in which they could find no nicotin—a result due to their ignorance of the fact that nicotin is decomposed by warm potassium hydroxid. In spite of the number of workers since their day who have found nicotin in tobacco smoke, the error of these men, so comforting to the smoker, still survives, and probably will survive for another thirty-seven years.

In almost all work on tobacco smoke, where the method of extraction has been described, the tobacco in weighed quantity is burned, the total smoke collected and the nicotin extracted. It is very evident that this method does not give the amount of nicotin actually taken into the mouth. When a man smokes a cigar or cigarette, much of the nicotin is volatilized and passes off in smoke at the point of combustion. Obviously then, in order to determine how much nicotin a man actually gets as he smokes, the smoke must be collected from what the young experimenter on wasps called "the business end" of the cigar or cigarette. For this purpose, we devised a simple apparatus constructed like a water pipe, with a wide mouthed bottle holding a rubber cork through which passed two glass tubes, one running to the bottom of the bottle and the other only through the cork. The long tube was bent at right angles outside the bottle and ended in a cigar holder. The short tube was bent over and flattened, serving as a mouthpiece. In using this apparatus, the bottle was two-thirds filled with hot water, the cigar or cigarette was placed in the holder, lighted and smoked from the stem, the smoke passing up through the water and losing most of its nicotin there and on the glass tubes. Some nicotin still came over in the smoke, so the saliva was collected, together with the washings from the tubes, and distilled along with the water from the bottle, which was changed as often as it became saturated with nicotin.

Experiment No. 5—One small "Havana" cigar weighing 54½ grains, was smoked in the apparatus, and the hot water and saliva distilled and extracted as before. The result was 7 drops of crude nicotin, as compared with the total of 9 drops contained in the cigar. Therefore a man gets 77% of the total nicotin content from the smoke of this cigar. The ash, together with the unsmoked stub weighed 15½ grains. As the original weight of the cigar was 54½ grains, the combustion products must have weighed 39 grains.

Experiment No. 6—When 54½ grains of Turkish Trophy tobacco, represented by 3¼ cigarettes, were smoked in the apparatus, only 2½ drops of nicotin could be recovered. Thus only 55½% of the total nicotin present in the cigar-

ette came over in the smoke, although 77% of that present in the cigar was recovered. This confirms the recent observations of W. R. Lee in the Pharmacological Laboratory of Cambridge University*. He burned equal amounts of a Virginia cigarette and a Manilla cigar and found that, although the Virginia tobacco in the cigarette contained nearly twice as much nicotin as the tobacco in the cigar, yet the smoke of the cigar was twice as toxic as that of the cigarette. He explains this as follows: During the combustion of ordinary smoking, there is an area immediately behind the point of combustion in which the water and other volatile contents of the tobacco condense. The hot gases passing through this area volatilize the nicotin. The smaller the area of cumbustion, the more complete it is and the less likely is the smoke to contain volatile toxic substances. "Hence," he says, "a cigarette or a slender cigar will yield fewer of these products than a thick cigar, and many smokers can testify that a thick 'fat' cigar has much more effect than a long, slender cigar of similar tobacco." Whatever the explanation, it is certainly true that less nicotin comes over in the smoke of cigarettes than in that of an equal weight of cigars containing the same amount of nicotin.

Experiment No. 7—This was for the purpose of determining the presence, or absence, of opium derivatives, or "dope" in the tobacco of cigarettes. Sweet Caporal and Turkish Trophy cigarettes were extracted with hot water and tested with the ordinary sulphuric acid plus cane sugar and with the nitric acid tests. No traces of opium derivatives could be found, nor, to tell the truth, did I expect to find any, although there is an unshaken and unshakable belief, even among medical men, that a philanthropic and benignant Santa Claus called the Tobacco Trust, is buying expensive opiates to mix with cheap cigarettes.

Experiment No. 8. This was to determine the presence, or absence, of arsenic in cigarette papers. After the number of chemists who have investigated this subject, I am ashamed to report any further work along this line, but the frequency with which one still hears arsenic mentioned as one of the deadly components of cigarette paper shows that one can scarcely give too much publicity to the truth regarding this matter. The La Croix Fils rice paper, which comes in red books, was macerated in hot water and the solution tested for arsenic by the silver nitrate plus ammonia, and various other standard tests for arsenic. No trace of arsenic could be found. The cheaper papers were then tested, including that given away with Bull Durham and with Duke's Mixture. No trace of arsenic. Next the papers were split off from Turkish Trophy and Sweet Caporal cigarettes and tested. No arsenic was present, even in traces.

And here are the results of our work: No arsenic in cigarette papers, no opiates in cigarettes and the smoke less toxic than that from cigars containing the same amount of nicotin.

Do you think I am telling you that cigarettes are harmless? Not by any means. Inasmuch as their bad effects must be entirely due to the nicotin contained in them, *per se*, they would be far less harmful than cigars smoked in the same manner and in equal quantity, but a pharmacological reason enters here which has been neglected because it is so evident. Cigarettes are dangerous because they are so harmless. When your little son, watching his chance, purloins one of your cigars and retires behind the house for his first smoke, he finds, to his sorrow, that smoking a cigar is not as easy as it looks. Unwittingly he performs an experiment in pharmacology. As the nicotin comes over in the smoke, his little

body begins to experience all the symptoms of acute nicotin poisoning. He feels a hot, burning sensation in his mouth which spreads down the esophagus to his stomach. He salivates profusely, is nauseated, vomits, thinks he is going to die and vows he will never smoke again if he comes out of this alive. On the other hand, if he smokes a cigarette first, the amount of nicotin which comes over in the smoke is not enough to make him sick and he continues to smoke cigarettes until nicotin tolerance is reached. Then, in the desire for something stronger, he either graduates into the cigar- and pipe-smoking class or inhales his cigarette. But cigarettes are not the only form of tobacco inhaled. On questioning a number of habitual smokers, I was astonished at the number who inhale their smoke. And this is not entirely confined to adults. A short time ago there came into my office a weak looking, anemic, hollow-chested boy of 16 who said he was afraid he was smoking too much and wanted me to give him something to cure the habit. He said he formerly inhaled cigarettes, but they are too weak for him now, and he habitually inhales both the cigar and pipe. Our recent anti-cigarette laws cannot touch this case. This boy may purchase all the cigars he pleases and inhale them to his heart's content, as long as he does not try to buy cigarettes. In the zeal of our legislators to protect the young against the evils of the cigarette they have entirely overlooked the greater evils of the cigar and pipe. They have strained at a camel and swallowed a gnat.

Anti-cigarette legislation for the young should be anti-tobacco legislation. If the young are to be protected from the evils of smoking—and nobody doubts that they should be protected up to a certain age—let it be by legislation which is intelligent, pharmacologically and sociologically; which understands that it is not some imaginary "dope" or poison in the paper of cigarettes which makes them harmful, but that it is the nicotin and only the nicotin, and that all tobacco is harmful in direct proportion to the amount of nicotin it contains. But not until such intelligent legislation shall prohibit the sale of all nicotin-containing smoking materials to boys, can we hope to even make a beginning of protecting them from a habit which, for 500 years, has held a considerable portion of the human race in thrall.

I wish to express my thanks and acknowledge my indebtedness to Mr. Harry J. Collisi, a medical student in the University of Michigan, for valuable assistance in carrying out the details of many of these experiments.

*Quart. Journal Physiol., 1908, I, 335. Reported in *Jour. Am. Med. Assoc.*, Jan. 30, 1909..

Cancer of the Female Breast.—Jackson of Kansas City, considers that early diagnosis in cancer of the breast is of the greatest importance to the cure of the patient. At east ninety-five per cent of all tumors of the breast are malignant, and it cannot be determined which of the remaining ten per cent will remain benign. It is a disease of middle age, cancer being rare under thirty years of age. Under thirty a tumor is probably benign. Heredity, lactation, and injury as factors are of little weight. Diagnosis depends on the physical findings gained by palpation. The finding of a lump in the breast, with fixation to the skin or fascia and dimpling due to involvement of the fascia are sufficient to make a diagnosis. Pain is an unimportant symptom, and retraction of the nipple is only confirmatory. Involvement of the axillary glands, in the absence of inflammatory signs is pathognomonic of cancer. There is no known cure for any tumor of the breast, benign or malignant, except by surgical measures. Every tumor of the breast should be considered malignant and treated as such at the earliest moment after detection, unless incision and immediate examination of a frozen section has shown it to be benign. To trifle with tumors of the breast is criminal, since it fritters away the chance of life for the patient.—*Medical Record*, December 4, 1909.

SPECIALISM IN SURGERY.*

LOUIS J. HIRSCHMAN, M. D.,
Detroit.

I wish to here and now, thank the members of the section of surgery and ophthalmology for the high honor they have bestowed upon me, in electing me their chairman for the year just closing. When there are so many more deserving members, whose selection as presiding officer of the section would have been more fit, I cannot but feel that the honor was not meant for me personally, but rather a recognition of that department of surgery, of which I am but a poor representative, namely, proctology.

There was a time not many decades ago, when every general practitioner of medicine essayed to minister to all of the ills of both body and mind diseased. Every physician attempted the diagnosis and treatment of diseases of all the organs and localities of the human body. With the rapid progress of science, however, it became apparent to many medical men that the practice of surgery was not their forte, while others seemed to show a special aptitude and developed special skill in their surgical cases. Thus the first step in the development of specialism and specialists was the division of the practice of our profession into medicine and surgery.

With the further development of medical knowledge, a better understanding of the etiology of diseases; the perfection of diagnostic methods and instruments, soon demonstrated that there was a great number of diseased conditions of the various organs of the body, whose existence it would have been impossible to have discovered heretofore.

With the discovery of, literally, thousands of diseased conditions where scores were thought to have existed previously, came a tremendous increase in the amount of surgical measures demanded for relief of patients suffering from these newly discovered diseases. In the meanwhile, in the great sub-division of medicine, the same development was going on. But inasmuch as our interests in this section are chiefly in matters surgical, we will devote our attention to the development of specialism in that other great division of medical practice—that of surgery.

The number of diseased conditions requiring surgical treatment for their relief has become so great, that in order that the best service be rendered a patient suffering from a given disease, sub-divisions of the practice of surgery or surgical specialties have been developed.

It is a well-known axiom that a "jack of all trades is master of none," and when one realizes that there are literally thousands of surgical procedures necessary to the successful treatment of surgical diseases, it becomes apparent that no one man, no matter how naturally gifted, scientifically trained, or thoroughly experienced, can devote the same amount of time or possess the required skill to treat a special disease of a definite organ as the man who devotes his entire time, skill, and knowledge to the study and treatment of diseases of that one particular organ.

It has been said in a recent article in the medical press, that any physician with a good knowledge of anatomy, who is a good mechanic and possessed horse sense

*Chairman's address delivered before the Section on Surgery and Ophthalmology, at the 44th Annual Meeting of the Michigan State Medical Society, Kalamazoo, September, 1909.

could operate. There is a vast difference, however, between a good operator and a skillful surgeon. He is the greatest surgeon who knows when not to operate!

The great surgeons of our day realize their limitations, and while there are a few general surgeons who attempt anything and everything amenable to surgical relief, from extracting teeth to hysterectomy, the vast majority are gradually limiting their work to certain organs or groups of organs. Even the general surgeon has given up the surgical treatment of diseases of the eye, the ear, the nose, the throat, the mouth, and the teeth, as well as the non-operative work of the orthopedic, the genito-urinary, the gynecic, the proctologic, and the gastro-enteric surgeon.

The time is coming, if it is not already here, when there will be no such specialty as general surgery. When a physician or one of his family is ailing from a surgical disease, does he consult the general surgeon, or the specialist in whose line the disease is included? In nine cases out of ten it is the specialist. The intelligent public today is educated up to the importance of special knowledge and skill in certain lines, and demands the care of the specialist. Would anyone within the hearing of my voice, suffering from a cataract, a club foot, a renal calculus, or an anal fistula, consult a general surgeon; when he knew that there were men who were devoting a large part, if not all of their time, to the study and treatment of these special diseases? I think not.

The development of the surgical specialist has been along lines which necessity has created. Men in general practice, realizing that the study and treatment of certain organs and diseases were neglected, began to give special attention to the study of these organs and their affections, and gave to the profession the results of their findings, and devoted their entire time to the study and treatment of certain specialized organs. Other general surgeons developed special skill in operations on certain organs, or on account of local conditions, secured an unusual amount of experience along certain lines. Others who developed a liking and a special aptitude for the study and treatment of some certain organ or organs, gradually limited their endeavors to certain restricted fields, with the result that the highest type of surgical knowledge has been developed by the surgical specialist.

For the general surgeon to do the same high grade of work in all of the surgical specialties as does the specialist, would require so much time given to the study of the diseases included in the various specialties and the latest methods of treatment, that he would have no time left for the practice of his profession. He would require so many special publications, journals and special instruments and apparatus, that it would pauperize him. He would have to work at least seventy-two hours a day to acquire the same amount of skill in the treatment of all of the special diseases, as the man who devotes his entire time and efforts to the study of any special branch or sub-division of surgery.

Inasmuch as the treatment of many diseases requires the knowledge of non-surgical and conservative measures as well as of surgical technique, the less radical methods do not find favor in the eyes of the general surgeon. Many cases require care of a surgical nature and non-operative treatment combined. This can best be given by one whose experience is great among the class of cases to which the one under treatment belongs; and who is continually (not occasionally) treating such cases. A specialist has just as much interest in those cases requiring non-surgical measures as in those demanding operative care. The general surgeon in the vast majority of cases, has little or no interest in the non-operative treatment of a given case.

Surgical specialism has developed today to such an extent that we have ophthal-

mologists devoting their time to the operative and non-operative treatment of the orbit; otologist doing likewise for the ear, and rhinologists and laryngologists for the nose and throat, respectively. The proctologist gives surgical and non-surgical treatment to diseases of the anus, rectum and colon, while the gynecologist limits himself to the treatment of diseases of the female generative organs. The abdominal surgeon limits himself to that region bounded above by the diaphragm and below by the pelvic floor. Deformities, malformations, and congenital defects are remedied by the orthopedic surgeon, who uses non-surgical and mechanical means fully as often, if not more so, than radical surgery. The urologist has for his special field, the surgical and non-surgical treatment of diseases of the genito-urinary system. The obstetrician limits himself to the employment of all measures necessary to the delivery of the new-born child, and must be prepared to do major surgery on short notice. There are in some of our medical centers gastro-enteric surgeons, who limit their field of operation to the organs of digestion.

The refinement of surgical specialism, however, is reached by those few men practicing in this and other countries, who have developed such superior skill and have acquired such vast experience in certain diseases, that they are limiting themselves entirely to the treatment of but one disease. We have today, for instance, specialists in the treatment of hernia and of goiter.

I trust that these few remarks of mine will not be misunderstood. The treatment of a great many of the more common affections occurring in the practice of every specialty has been, is being, and will be successfully accomplished by every general practitioner of medicine. It is not intended that all the diseases to which human flesh is heir should be divided up among specialists, and the general practitioner merely degenerates into a bureau of information to direct the patient to his proper specialist.

What your chairman wishes to emphasize, however, is that the practice of surgery has become so vast, that the more complicated cases and those requiring special care which it is not possible for the general practitioner, on account of lack of training, experience, time, and special apparatus to give, should be in the interests of the patient given the benefit of the skill and knowledge which the specialist in his respective department alone possesses. The specialist in surgery did not "just happen," like "Topsy" in Uncle Tom's Cabin, but is the result of an urgent demand by a long-suffering public, and an over worked profession!

A one-sided conjunctivitis or irritative condition, with tearing, photophobia, and lid-spasm should always suggest the presence of a foreign body on the cornea or behind the lid. In the latter case puffiness of the upper lid develops very rapidly and is a diagnostic aid.

An old, narrow Graefe cataract knife is an ideal instrument for opening the drum membrane in otitis. Ethyl chlorid narcosis is the best for this brief operation.

Intermittent mucoid or mucopurulent discharge from the ear without pain or fever suggest nasopharyngeal disease; in children, adenoids.

For the diagnosis of fractures of the upper end of the femur careful measurements are often of greater value than any manipulation—and much safer.

When a patient with inflamed varicose veins develops suddenly dyspnea and cyanosis, don't sit her up to examine her—the probability of pulmonary embolism is too great.—*American Journal of Surgery.*

SENILE HYPERTROPHY OF THE PROSTATE*

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This is an important subject for discussion before the State Society, because of its prevalence. In nearly every community there are one or more old men using catheters, and in some there are practitioners who think the mortality for prostatectomy to be fifty per-cent. It is unnecessary to recall the symptoms of the disease, but I wish to review in brief some of its pathology.

Senile hypertrophy is now regarded as a result of an inflammatory process; it does not follow that the inflammation is necessarily gonorrheal, as there are other ways in which infection may reach the gland. The size of the gland has little clinical significance, and the smallest may cause the complications incident to the disease, quite as readily as one, large in its proportions. Why the cells of the acini at times wander into the interstitial tissue to the formation of a malignant process, we do not know. "In no other locality in the human body can the changes from a simple inflammation to carcinoma be so readily demonstrated as in the prostate." The percentage of cancerous prostates now being found puts a new aspect upon the study of the diseast of this gland, as well as added responsibility upon him who operates in this field of surgery. In those glands which show a malignant process from the first, the diagnosis is generally easy, but as is often the case, the neoplastic growth follows that of hypertrophy, rendering diagnosis impossible, as the symptoms are identical. Microscopical demonstration of cancer, in these last mentioned, requires exhaustive search (because of its complication with inflammatory changes) by an expert pathologist, and the employment of a freezing microtome, while the operation waits.

Senile hypertrophy is entirely a surgical disease, and for the following reasons I wish to enter a plea for earlier operative interference for all cases of prostatic enlargement: Because of its liability to become malignant. The removal of the prostate, by either the perineal or the suprapublic route, will not cure posterior sacculation that has existed for years. It will not restore tone to long continued stretching of bladder muscles; nor will it remove cicatricial tissue from the walls of a viscus that has suffered from an old interstitial inflammation. Those patients operated upon between the ages of 55 and 62 years are the ones who sit up in the chair the second or third day following operation, gain control of the sphincter and bladder during the first week, and leave the hospital entirely healed and cured without the above complications, at the end of three weeks. The question of operative routes is of little importance as compared to that of earlier operation and better results will follow, not from perfection of technic, but from an educational reform that will insure these patients a much larger percentage of uncomplicated results.

During the year ending September 1st there have been presented at the Uni-

versity Hospital 32 cases of prostatic enlargement. One was refused operation because of complications. Another declined operation and returned home. Five were cancers, and have already been reported by me in the *Journal of the American Medical Association,* July 24, 1909; the remaining 25 were simple senile hypertrophies. Of these two died. I have had communications from the first 16 who returned to their homes; one has a fecal fistula, the result of one of my first operations, and tearing into the bowel. One has a severe cystitis, and posterior sacculation. I have no dribblers; none suffering from overflow, and all controlling the stream. I have performed all my enucleations by the perineal route. While I had the misfortune to tear the bowel in this one patient, I think the accident is no more likely to occur to me again, than that I should open the general peritoneal cavity, if I employed the suprapublic route.

My decision in favor of the perineal route, and a continuation of its employment, has been greatly influenced by the following: A large percentage of prostatic cancers cannot be differentially diagnosed from senile hypertrophy before operation. Suprapubic enucleation should never be attempted for cancer, as only by chance it is removed in this manner. The operation of Young, of complete extirpation, is the only treatment that lends hope for the cure of prostatic cancer.

Sixteen states and territories of the United States provide no place where the poor consumptive can be treated, except in jails and insane asylums. This statement together with another, to the effect that not one in thirty of the victims of consumption who want to get in hospitals can find a place there, a fact which will mean a loss to the country of $1,275,000,000 is made by the National Association for the Study and Prevention of Tuberculosis in a bulletin issued today.

The National Association states that there are in the United States at least 300,000 consumptives who are so poor that they cannot pay for proper medical treatment in tuberculosis sanatoria and hospitals. Some of them can pay small amounts a week for their maintenance, but the great majority of them cannot pay anything. For this large class of patients the entire country has provided only 10,000 beds for the free treatment of tuberculosis. In Alabama, Arkansas, Idaho, Kansas, Mississippi, Montana, Nevada, North Dakota, Oklahoma, Oregon, Philippine Islands, South Dakota, Texas, Utah, West Virginia and Wyoming there is no place where the consumptive without means can be treated but in jails or insane asylums and in most cases he will get no treatment there. Sixteen other states provide less than 50 beds each for poor consumptives. In only two states, Massachusetts and New York, have beds for needy tuberculosis patients been provided, so that at least one in ten may find a place for treatment. In many of the other states, not one in 50 of the destitute consumptives can find a bed in a hospital or sanatorium.

It costs on an average about $250 to cure an incipient consumptive or to care for an advanced case until death. If he is left in destitute circumstances without proper attention, he will surely infect with his disease at least two other persons, and possibly many more. Considering that the average life is worth to society in dollars and cents, about $1,500, the net loss which would accrue to a community by not treating its poor consumptives in proper institutions would be for each case, including those who are unnecessarily infected, at the very lowest figure, $4,250. On this basis, if the poor consumptives in the United States who are now sick were segregated from their families, and either kept in institutions until they died, or else cured of their disease, the saving to the country would be the enormous sum of $1,275,000,000.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Wilfrid Haughey, M. D., Editor, Battle Creek, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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JANUARY

Editorial

So of doctors. They like fees no doubt—ought to like them: yet if they are brave and well educated, the entire object of their lives is not of fees. They, on the whole, desire to cure the sick; and, if they are good doctors, and the choice were fairly put to them, would rather cure their patients and lose their fee than kill him and get it. And so with all other brave and rightly trained men; their work is first, their fee second—very important always, but still second. But in every nation, as I said, there are a vast class who are ill-educated, cowardly, and more or less stupid. And with these people, just as certainly the fee is first, and the work second, as with brave people, the work is first and the fee second. And this is no small distinction. It is the whole distinction in man; distinction between life and death in him, between heaven and hell for him.—Ruskin's Essay on Work.

The forthcoming revision of the pharmacopoeia will affect the work of every physician, and it is a hopeful sign of the times that there is perhaps greater interest in the subject than ever before. At no time in the history of American medicine have rational materia medica and legitimate pharmacy played a more active part in the every day work of the physician than today. This is in no small measure due to the work of the Council on Pharmacy of the American Medical Association, under whose leadership many of the frauds of pseudo-scientific therapeutics have been exposed.

In general it may be said that the practitioner has five sources from which to draw in prescribing. They are the pharmacopoeia, the national formulary, books containing a compilation of favorite recipes, text books and current medical literature, and advertising matter. In the past it is probable that the last source has furnished more prescription material than the other four combined. The pharmacopoeia, on the other hand, has probably been the least used by the rank and file of the profession, despite the fact that the preparations contained therein have had a long recognized position, and are now acknowledged as of a certain legal standing, because of the importance given them by the Food and Drugs Act.

The "New and Non-Official Remedies" listed in the book of that name compiled by the Council on Pharmacy, comprise most of the newer drugs which are of scientific value, and it will be one of the difficult tasks of the forthcoming convention to decide which of these shall be admitted to the ninth edition of the U. S. P. In discussing these new drugs, Professor Long, of Northwestern University, in an able article says:

> Many of the newer remedies are definite chemical compounds, so-called organic synthetics in most cases, and are usually patented by the firms manufacturing them. While often discussed in the journals they are best known through the advertising literature sent out by the manufacturers or their agents. It is universally admitted that the therapeutic value of some of these proprietary products is great, and their success has led to the production of a host of substitutes or imitations. I am not including here the so-called "patent medicines" which are usually frauds and which are popular because they contain alcohol, morphine, cocaine, or some other potent but dangerous drug. The real physician has nothing whatever to do with these mixtures, whose exploitation is little short of robbery of the public to whom they are popularly advertised. But I refer to such patented products as acetyl salicylic acid, introduced as aspirin, to the suprarenal compound epinephrine, sold under the name of adrenalin, adrin, suprarenalin, etc., by different firms, to the sulpho-methane bodies, the organic silver preparations, and to others which have become well known.

The most important and the most useful of these drugs will probably become official, making the new pharmacopoeia even more useful than it is today. The work of the convention is done by delegates from incorporated medical societies, medical schools and schools of pharmacy and societies of pharmacists.

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The history of the development of the pharmacopoeia as we know it today is interesting. In 1817, Dr. Lyman Spaulding, of New York, proposed that the United States be divided into four districts, that each district should hold a convention and compile a district pharmacopoeia, and then that delegates from each district should bring their respective compilations to a general gathering at Washington, where a national pharmacopoeia should be made up. Two districts followed the plan, conventions being held at Boston and at Philadelphia on June 1, 1819. There were no meetings in the middle or western sections. The first national convention met in Washington on January 1, 1820, did its work and published our first pharmacopoeia at Boston, in December, 1820. A reprinting was made in 1828. The convention of 1820 was made self perpetuating by instructing its president to issue a call in 1830 for three delegates from every incorporated medical society and college. The district plan was abandoned in 1840, but the general scheme has since been followed. In 1830 there were 13 delegates; in 1840, 20 delegates; in 1850, the incorporated schools of pharmacy were included, and there were 30 delegates; a like number met in 1860; this number was doubled in 1870 and in 1900 the number had grown to 207.

From this brief sketch we learn that this important book was originated by us and is our work. Yet, do not many of us feel that the U. S. P. is purely a pharmaceutical work, and not a therapeutic work guide? As the editor of the *Journal of the American Medical Association* puts it:

> The medical profession during the past thirty years has not given to the revision of the Pharmacopoeia the attention which its importance deserves. In spite of the fact that this book originated with the medical profession and was compiled and published primarily for its use, it has come to be regarded too much by physicians as a book which is of interest and value mainly, if not solely, to the pharmacist and in which the physician is not especially concerned. Two definite steps should be taken before the meeting of the next convention in Washington: (1) All incorporated state medical associations and medical colleges entitled to representation should select the three best representatives possible and should see to it that they attend and take part. (2) Each county society should devote at least one meeting during the winter to a discussion of the present Pharmacopoeia and the formulation of suggestions as to its improvement.

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Speaking of the editor of the Journal of the American Medical Association reminds us of a recent article in *The Midland Druggist and Pharmaceutical Review*, a journal of pharmacy published in Columbus. The December issue contains a sketch of the life and work of Dr. Simmons which is highly eulogistic, though none the less just. It speaks honestly of the splendid work which Dr. Simmons has done since becoming secretary of the association in these words: "Through his constructive efforts the association has evolved from a loosely coherent body into a closely knit and powerful organization the decision of which upon ethical and professional questions is accepted as the last word by the great majority of medical practitioners of the United States, and is received with corresponding respect abroad, while the *Journal* has developed from a comparatively unimportant publication of limited usefulness, into the most widely circulated and most influential medical pub-

lication in the world."

This appreciation of Dr. Simmons personally is very pleasing to his host of friends and supporters, yet it is even more gratifying to know that the journal of an allied profession which has formerly been out of sympathy with the work of the Council on Pharmacy should at last come to realize the vast importance of its work. This recognition is given in no uncertain words. To quote:

It was also due to his (Dr. Simmon's) constructive genius that the now celebrated Council on Pharmacy and Chemistry was organized, the efforts of which have been mainly devoted to the investigation and exposure of fraudulent proprietary medicines, whether advertised to the medical profession or direct to the laity. His work in this connection has been fearless and uncompromising. Many of the most blatant frauds of the proprietary class have been entirely driven from the market, the sale of others has been greatly reduced by their exposure, while still others have largely modified their claims as to therapeutic efficiency.

So effective have been the efforts of the Council in this respect that the bare announcement that it is on the trail of a fraudulently described or advertised preparation is sufficient to send makers and dealers scuttling for cover.

Naturally Dr. Simmons is *persona non grata* with the proprietors of the medical and pharmaceutical frauds which he has exposed, but he remains apparently undisturbed by this contraction of his visiting list.

There is certainly no better moral or other reason why the makers and distributors of a proprietary medicine should practice fraud and deception without restraint than that the makers or dealers in any other fraudulent product should escape exposure and punishment.

For many years the laws of nearly all the states have been such that if one sought to practice medicine or pharmacy in a single neighborhood, he was permitted to do so only after passing the gauntlet of a medical or pharmaceutical examining board, and was then required to practice under certain restrictions, but if he went into the business in a wholesale way he might practice either or both professions over the entire United States without let or hindrance and without any other restraint upon his ability to deceive than those imposed by the physical limitations of type and printers' ink, and as a consequence the public has been the prey of charlatans of every class and degree.

For a long time those who grew rich by the practice of such wholesale fraud have been permitted to flourish without molestation, but these halcyon days are passing, and for this, so devoutly to be wished-for consummation no one is entitled to so much credit as Dr. Simmons.

Others, among these who have violently opposed the work of the Council, will sooner or later appreciate what it is doing, and will come to feel, as do we, that the reforms brought about by the association along these lines will be looked upon as the most important event in the medical history of the decade just closed.

* * *

To keep their policyholders in good health would seem to be a good business proposition on the part of insurance companies. Just as the agents of casualty companies inspect factories and elevators in order to detect imperfections before harm results, so life insurance companies should look after, to some extent at least, their policyholders and endeavor to keep them well. This principle has been recognized by several of the fraternal benefit societies which have established sanataria for those of their members who contract tuberculosis, and it will likely not be many years before the old line companies undertake similar work.

About six months ago the Provident Savings Life Assurance Society of New York inaugurated prophylactic work of this kind. The matter, however, has not received the attention from the medical press which it deserves. In connection with a notice to the examiners that the fee would be again $5.00 for an examination, the following paragraphs were included. They are self explanatory.

The Society is about to establish a bureau for

the purpose of keeping the policyholders informed on matters of hygiene and the latest scientific developments in the prevention of disease. This bureau will, of course, be conducted on strictly ethical lines and in conformity with the laws affecting the practice of medicine in the various States. No medical treatment will be given to policyholders, but the bureau will endeavor to guide them as to the proper measure to take for the protection of their health and the early detection of disease. Under the rules of the bureau each policyholder will be entitled to an examination by one of the Society's examiners, free of cost, at intervals of two years. These examinations will usually be made at the examiner's office and involve an inquiry into the general health, condition of the heart, lungs, arteries, nervous system, etc., and a very brief report of the examiner's findings, on a special blank form. No urinary analysis will be required of the examiner, as this will be made at the home office.

For such examinations the Society will pay a fee of $2.00, which is the maximum that can be allowed, inasmuch as no charge is made for the examination and no new assurance will be issued thereon. It should also be remembered that it is entirely optional with the policyholders as to whether they shall avail themselves of this privilege, which is extended to them for the benefit and protection of their health.

Naturally, it is expected that a benefit to the Society will result in increased mortality savings.

As a result of the activities of this bureau it is hoped that the policyholders will be brought into closer relations with the medical profession, and, that they will be awakened, not only to the importance of taking thought for their health, but to the dangers of experimentation with quacks, charlatans and patent remedies.

* * *

The Officers of the Society. On account of ill-health in his family, Dr. Mortimer Willson, of Port Huron, has resigned as councilor of the sixth district, and President Carstens has appointed Dr. W. J. Kay of Lapeer, to fill the vacancy.

At the January meeting of the Council, Dr. Wilfrid Haughey, of Battle Creek, was chosen secretary-editor, and Dr. George F. Inch of Kalamazoo, treasurer of the State Society.

Book Notices

Systematic (including special) Pathology. By J. George Adami, M. D., and Albert G. Nicholls, M. A., M. D., F. R. S., Assistant Professor of Pathology in McGill University. In one octavo volume of 1082 pages, with 310 engravings and 15 colored plates. Cloth, $6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

The second and last volume of Adami's Pathology has just appeared and it completes the first really great work upon the subject in English. With the appearance of the first volume the old opprobrium that our pathology is but the echo of that of the Germans was disposed of, for that volume was highly original both in material and in the manner in which it was set forth. The immediate and widespread welcome accorded it furnished abundant proof that the profession was in need of just such a work and the fact that it was appreciated may be said to be a test of the intelligence of the American physician.

In this volume systemic pathology is covered in a thoroughly logical manner. One striking feature is the inclusion of much matter relating to diseased function. It is well that this is so, for to the clinician it is perhaps the most important aspect of pathology. We find then a departure from the time honored morbid anatomy and histology (which, however, have received due attention) the text being based to a greater extent than is commonly done, upon embryology, physiology and chemistry.

The subject is covered under ten headings, each referring to a "system," beginning with the cardio-vascular and ending with the osseous. A certain quite definite order has been followed making the whole logical, one subject following the preceding in a systematic manner.

The same easy and charming literary style, and the same tracing of cause and effect, give the reader the reasoning in a way he will not forget, and endow him with a mastery of his profession that will render him a better practitioner, no matter what his previous attainments may have been. The reputation already won by the first volume will render every reader anxious to possess its companion, and will set American medicine on an even higher plane, both of science and practice.

The Diagnostics of Internal Medicine. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis. By Glentworth Reeve Butter, M. D., LL. D., Physician-in-Chief, Methodist Episcopal Hospital, Brooklyn. Third Edition, 1193 pages, 5 colored plates and 272 text illustrations. Cloth, $6.00. New York, D. Appleton & Company, 1909.

This book has been a favorite with many since its first appearance, and justly so, for it is well arranged, clear in diction, well illustrated and well indexed. It covers the whole field of the diagnostics of internal medicine, both clinically and from the laboratory standpoint. In the preparation of a new edition the author has carefully gone over the material and has eliminated those portions which experience has proven of little practical value, as for example, the section on Kryoscopy. There are many changes in the text, few perhaps of prime importance but taken in the aggregate they go to show the progress which we are making in methods of exact diagnosis.

A Text-Book of Surgical Diagnosis. For students and practitioners. By Edward Martin, M. D., professor of Clinical Surgery, University of Pennsylvania, Philadelphia. Very handsome octavo of 764 pages, with 445 engravings, largely original, and 18 full-page plates. Cloth, $5.50, net. Lea & Febiger, Philadelphia and New York.

This is one of the most useful books which has come to our notice within the past year, for it contains a fund of most valuable information set down in a readable style, systematically arranged and so indexed as to be easily found. Since the family physician is the one who is usually called upon to make the first diagnosis, a book of this kind is invaluable to him.

The work opens with a chapter by Longcope on laboratory diagnosis. It is clear and concise. H. K. Pancoast wrote the chapter on X-ray diagnosis, Anspach the one on gynecological diagnosis, and Weisenburg the section on diseases of the nervous system.

There are chapters on the blood-vessels, lymph-vessels and glands, muscles, tendons and bursae, bones and joints, and genito-urinary organs; the chapter on the last named subject is an especially good one, as one would expect from the author's large experience.

A marked feature is found in the illustrations which, like the text, are inserted for instructiveness and not embellishment. They are mostly original and are designed to exhibit the diagnostic points. It would have been easier but worse than useless to fill the book with shocking pictures of fully developed and hopeless disease, but true to his theme, the author has chosen to delineate the early symptoms, showing them in as simple and clear a manner as possible.

The book is to be heartily recommended.

A Text Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology, Johns Hopkins University, Baltimore. Third Edition, Thoroughly revised. Octavo of 998 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, $4.00, net; half morocco, $5.50, net.

The third edition of this valuable work is a worthy successor to those that have preceded it. The advances made since the appearance of the last edition have been carefully incorporated in the text.

A thorough review reveals changes in diction in various parts of the text which add to the ease with which it may be read. New topics have been added as well as new illustrations. Several recent theories are included, e. g., DeVries theory of mutations, and Mendel's law of inheritance, usually known as the Mendelian Law. Rubner's observations on growth and the laws formulated as a result are exceedingly interesting and instructive.

Many other additions to topics are worthy of note, for example, studies on capillary and venous blood pressure, on the ventricular output of the heart, on heat regulation, chemical and physical, on fatigue and its specific toxin, on ferments, on dietetics, etc.

There is a notable absence of superfluous material, which fact makes the book more valuable to those for whom it was intended, the practitioner and student.

The work will remain the best work on physiology in English.

Essentials of Laboratory Diagnosis. By Francis Ashley Faught, M. D., Director of the Laboratory of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Pages 309, 34 illustrations and 6 plates. Limp cloth. Philadelphia, F. A. Davis Company, 1909.

This is a very attractive manual covering the subject in a practical manner and containing all information necessary to provide a working outline of clinical laboratory methods.

Besides the sections usually found in such books, covering the use of the microscope, the examination of the sputum, blood, stomach con-

tents, feces, etc., there are sections on the opsonic method and bacteriological methods. An appendix contains useful formulae, tables of weights and measures, forms for reports, etc.

In the section on the animal parasites the common names should have been given. In describing the inflation of the stomach by means of tartaric acid and soda bicarbonate, the tartaric acid should be given first and not as advocated by the author. There is a discrepancy in technic on page 134. "Poisoning by toad stools is also a frequent cause of serous stools," was carelessly allowed to pass on page 144. There is now and then a mispelled word. However, for a first edition the text is remarkably free from errors.

The book is to be recommended.

Books Received.

The Practitioners' Visiting List. Edition for 1910. Wallet-shaped book, bound in flexible leather. For 30 patients per week, $1.25. Lea & Febiger, Philadelphia, 1910.

Treaures of Truth. By George F. Butler. Board covers, 75c. Published by S. DeWitt Clough, Ravenswood Station, Chicago, 1910.

The Physician's Pocket Account Book. By J. J. Taylor, M. D., bound in full leather, 24 pages of practical instructions for physicians, 216 pages of accounts. Price $1 per copy; published by The Medical Council, 4105 Walnut St., Philadelphia, Pa.

Practical Medicine Series. Edited by G. P. Head, M. D. Vol. IX. Skin and Venereal Diseases, by W. L. Baum, M. D., and Miscellaneous Topics, by H. N. Moyer, M. D. Year Book Publishers, Chicago, 1909.

Third Report of the Welcome Research Laboratories. Published for the Department of Education of the Sudan government, Khartoum. Balliere, Tindall and Cox, London, 1909.

Vital Economy, or How to Conserve Your Strength. By John H. Clarke, M. D. Pages 118, cloth. New York: A. Wessels, 1909.

International Clinics. Vol. IV. Nineteenth Series. Edited by W. T. Longcope, M. D. Octavo, pages 320. Illustrated. Philadelphia: J. B. Lippincott Company, 1909.

County Society News

County Secretaries' Association.

The second annual meeting of the County Secretaries Association of the Michigan State Medical Society was held at the Cadillac hotel, Detroit, on January 13, 1910, at 2 p. m.

Those present were: Dr. George H. Simmons, general secretary of the American Medical Association; Dr. J. H. Carstens, president of the State society; Dr. B. R. Schenck, retiring State secretary; Dr. Wilfrid Haughey, secretary-elect; councilors Baker, Bulson, Dodge, Ennis and Seeley, and the following secretaries and members: Bird, Oakland; Bower, Montcalm; Bradley, Bay; Chapman, Muskegon; Chase, Lenawee; Conboy, Huron; Eggleston, Lapeer; Garver, Tuscola; Green, Hillsdale; Hastie, Kent; Hume, Shiawassee; Keating, Washtenaw; Kinsey, St. Joseph; MacLean, Saginaw; MacKinnon, O. M., C. O., R. O.; Scott, Sanilac; Wheeler, St. Clair; Williams, Muskegon, and Winter, Jackson.

The president, Dr. F. C. Warnshuis, of Grand Rapids, not being present, Dr. H. L. Bower, of Greenville, was chosen chairman and Dr. F. C. Kinsey, of Three Rivers, secretary pro tem.

The following papers were read. (To appear in later issues of The Journal.):

Medical Organization Work, Dr. A. E. Bulson, of Jackson, Councilor of the Second district.

The Councilor's Relation to the County Secretary, Dr. W. P. Dodge, of Big Rapids, chairman of the Council.

Business Affairs of the County Secretary, Dr. A. C. MacKinnon, of Lewiston.

Post Graduate Work, by Dr. Wilfrid Haughey, secretary-elect of the State Society.

The Relation of the County Secretary to the State Society, Dr. B. R. Schenck, retiring secretary of the State society.

Some Ethical Problems of the County Secretary, Dr. F. C. Kinsey, of Three Rivers.

The Muskegon-Oceana Plan of Meetings, Dr. V. A. Chapman, Muskegon.

Legal Defense Work, Dr. F. B. Tibbals, of Detroit, chairman of the Legal Defense Committee of the State society.

The papers were all interesting and well received. The annual election of officers held immediately after the meeting, resulted as follows: President, Dr. V. A. Chapman, of Muskegon

(Muskegon-Oceana County); Vice-President, Dr. D. Conboy of Bad Axe (Huron County); Secretary, Dr. W. C. Garvin, of Millington (Tuscola County).

The meeting was then adjourned until evening, when the visiting secretaries were the guests of the State society at a five course dinner served in the Florentine room of the Hotel Cadillac. After dinner, Dr. J. H. Carstens, president of the State Society, spoke on "The Michigan State Medical Society." He was followed by Dr. George H. Simmons, general secretary of the American Association, who closed the evening with a paper entitled, "The County Society, and How It Can Be Made More Effective for yood."

F. C. KINSEY, Secretary Pro Tem.

Grand Traverse.

The regular meeting of the Grand Traverse County Medical Society was held at the residence of Dr. H. B. Garner, Traverse City, Januray 4, 1910. The vice-president, Dr. E. B. Minor, presided. The attendance was large.

Dr. Garner read an interesting paper on "Surgical Emergencies," which was followed by a general discussion. Dr. H. D. Purdum read a paper on "The Present Status of Thyroid Surgery."

Dr. E. B. Minor was elected delegate to the Bay City meeting of the State society, to be held September 27, and 28. Dr. Martin was elected alternate.

R. E. WELLS, *Sec'y.*

Houghton.

The December meeting was held at the Red Jacket Council rooms, Calumet, with a very large attendance. Dr. A. R. Tucker, Mohawk, reported a "Case of Cyst in the Inguinal Canal Simulating Inguinal Hernia." The cyst was large, attached to the internal ring, with an adhesion to the tip of the appendix.

Dr. S. S. Lee, of Osceola, read a paper on "Cystitis." He said that a classification based on etiology is difficult on account of the numerous causes. It is due to a microbic infection and generally a purulent process. Various conditions favor infection, as obstruction to the passage of urine, traumatisms, foreign bodies, new growths, etc. The symptoms are frequency of urination, pain, tenesmus, pus, epithelial cells and sometimes blood in the urine, the microscopic and chemical analysis being used to confirm the diagnosis. Those possessing the dexterity to use the cystoscope find it of great value, especially in differentiating cystitis from pyelitis.

The treatment of the acute form gives the best result, but in any form we are liable to have a relapse. The following are the principal indications in treatment. (1) Remove the cause, if possible. (2) Relieve pain and frequent urination. (3) Change the urine into a condition unfavorable to germ growth. (4) Check suppuration.

Dr. C. H. Rodi, Calumet, had for his subject "Pyelitis," which he said manifests itself in three forms, viz., That arising from inflammation of the substance of the kidney, from the pelvis of the kidney; and abscess of the kidney.

The infectious diseases as a causative factor are frequently overlooked. A frequent examination of the urine would reveal cases that are usually not recognized. Pus would be found, but sometimes in very small quantities. The cases ushered in by a slight chill are usually self limited. Where the chill is heavy we usually get a suppurative pyelitis. Foreign bodies may cause pyelitis, or it may arise from the extension of disease upward. In the chronic form cystitis and tuberculosis are common causes. In the tubercular form we have emaciation and slight evening rise of temperature, with tubercle bacilli in an acid urine.

In cystitis the urine is ammoniacal, but this does not exclude the presence of tuberculosis of either kidney.

Obstruction of the ureter, preventing the escape of pus, gives rise to a tumor and may simulate floating kidney, distended gall-bladder, etc. The essayist related a case of tumor in the region of the appendix, simulating appendiceal abscess, but pus in the urine made the diagnosis easy. The abscess was evacuated through the loin, but the patient is now suffering from Bright's disease.

Dr. S. S. Lee related a case on which he had performed an autopsy and found a smooth stone in the pelvis of the right kidney. It was as large as a hen's egg. The patient's physician had known her for years, but during this time she had never made any complaint of trouble in the kidney.

Dr. W. T. S. Gregg reported two cases of pyelitis. The first case was reported at the June meeting. The second was a more recent case. In this case there was a distinct tumor in the left

pelvis with pus in the urine. The kidney was opened and drained. The sinus closed, but opened a third time. The kidney was removed extraperitoneally through an anterior incision and the patient made a good recovery.

Dr. L. A. Farnham reported two cases of cystitis without any demonstrable etiological factor. No catheterization. No infectious disease.

Dr. H. H. Runonavarro related a case of colon bacillus cystitis which was placed under an opsonic treatment with a gradual diminution of pus and final recovery.

Dr. Rodi closed the discussion with a report of a case of cystitis following catheterization for overdistention, treated years ago by a method in vogue at that time of constant and free drainage gradually becoming worse, extending to the ureters and kidneys and finally terminating fatally.

JOHN MACRAE, *Sec'y.*

Huron.

The January meeting of the Huron County Medical Society was held at Bad Axe, in the Court House, on January 10, 1910. The following papers were read: Hypernephroma of Kidney, with Report of a Case, Dr. B. Friedlaender, and Indigestion Due to Hyperacidity, Dr. D. Conboy.

D. C. CONBOY, *Sec'y.*

Ionia.

At the meeting of the Ionia County Medical Society, held January 13, 1910, the following program was carried out in full:

1. "Infantile Paralysis," Dr. John McCan, Ionia.
2. "Appendicitis," Dr. Jos. F. Pinkham, Belding.
3. "Cancer from the Viewpoint of the General Practitioner," Dr. F. A. Hargrave, Palo.

Drifted roads and delayed trains did not deter the faithful and we had the largest attendance in months, although the banquet was delayed nearly two hours in waiting for trains to get in. The banquet was greatly enjoyed, the smoker full of comfort and the speech-making piquant.

The papers were all presented and were fine, being followed by discussions, everyone present taking part. There was no stiffness, no diffidence, each felt at home, and all expressed the sentiment that this was the best meeting yet.

C. S. COPE, *Sec'y.*

Lenawee.

At the regular meeting of the Lenawee County Medical Society, held at Adrian, January 11, 1910, the following officers were elected: President, Dr. George Lamley, Blissfield; Vice-President, Dr. O. Whitney, Jasper; Secretary-Treasurer, Dr. A. W. Chase, Adrian.

Dr. Esli Morden read a paper on "Mastoid Disease" and reported a case. The papers are always followed by an experience meeting in which every man reports a case, which is discussed by everyone.

Lenawee has a good live society and we have a meeting the second Thursday of every month. We always have some good papers and a good lively time.

A. W. CHASE, *Sec'y.*

Manistee.

At the annual meeting of the Manistee County Medical Society, held at the Dunham House, December 28, 1909, the following officers were elected for the ensuing year:

President, Dr. Harlan McMullen, Manistee; Vice-President, Dr. R. A. Jamieson, Manistee; Secretary, Dr. J. C. Christianson, Manistee; Treasurer, Dr. H. D. Robinson, Manistee; Delegate to the State Meeting, Dr. J. C. Christianson, Manistee; Alternate, Dr. Harlan McMullen, Manistee; Member of the Medico-Legal Committee, Dr. Jas. R. King, Manistee.

The society also adopted the plan for Medical Defense at this meeting.

A fine banquet was served and matters of interest to the local profession were discussed.

J. C. CHRISTIANSON, *Sec'y.*

St. Joseph.

The annual election of officers of the St. Joseph County Medical Society was held on January 5th and resulted as follows:

President, Dr. F. C. Kinsey, Three Rivers; Secretary-Treasurer, Dr. S. R. Robinson, Sturgis; Delegate to State Meeting, Dr. A. W. Scidmore, Three Rivers; Member of Medico-Legal Committee, Dr. Fred Robinson, Sturgis.

S. R. ROBINSON, *Sec'y.*

Tri-County.

At a meeting of the Tri-County Medical Society, held in November, 1909, the following of-

ficers were elected: President, Dr. David Ralston, Cadillac; Vice-President, Dr. John Barry, Harrietta; Secretary-Treasurer, Dr. W. J. Smith, Cadillac; Board of Directors, Dr. A. Brodeur, Cadillac; Dr. W. Wallace, Manton; Dr. J. Gruber, Mesick; Program Committee, Dr. C. C. Miller, Cadillac; Dr. J. Vermeullen, Cadillac; Dr. W. J. Smith, Cadillac; Delegate to State Meeting, Dr. W. B. Wallace, Manton; Alternate, Dr. O. L. Ricker, Cadillac; Finance Committee, Dr. J. M. Wardell, Cadillac; Dr. C. E. Miller, Cadillac; Dr. S. C. Moore, Cadillac.

W. J. SMITH, *Sec'y.*

News

Dr. H. B. Garner, of Traverse City, has recovered from his recent illness and is planning a removal to Detroit.

Dr. C. Hollister Judd, of Detroit, has removed his office from the Fine Arts Building to 32 Adams avenue west.

During the Christmas holidays a number of physicians of Detroit, accompanied by Mr. F. B. Stratton, of Stratton & Baldwin, architects, visited Cincinnati, Washington, Baltimore, New York and Boston, in the interests of the new Detroit General Hospital. Plans for the new hospital are being pushed and ground will be broken when the plans are completed. Detroit is greatly in need of increased hospital facilities, and never has the need been more acute than during the past month.

Dr. C. A. Carlson, formerly of Rapid River, has been located in Escanaba for the past two months.

Dr. G. L. Renaud, of Detroit, has returned from a southern trip.

Efforts to reduce the mortality of infants in Detroit will be made along the lines followed in some of the larger eastern cities. The board of health recently, on the recommendation of Health Officer Kiefer, voted to establish a mothers' clinic in which mothers will receive instruction and aid in the care of their babies. This clinic will be opened in the board of health building as soon after January 1 as possible, and until July 1 next will be conducted without expense to the board. A physician and nurse will be in attendance and proper food will be supplied for infants. Dr. Francis Duffield has volunteered to give his services.

Dr. F. W. Shumway, Secretary of the State Board of Health, spent six weeks in Mexico recently. He was accompanied by Governor Warner and State Banking Commissioner Zimmerman.

At the last meeting of the Board of Regents a committee was appointed to investigate the possibilities of removing the fourth year of the Medical Department of the University to Detroit, where better clinical facilities may be obtained.

The annual meeting of the Detroit Tuberculosis Sanatorium was held January 18th in the Hotel Pontchartrain. Annual reports were read and the following Board of Trustees elected: Dr. H. J. Hartz, Mrs. Wm. A. McGraw, Clarence Neely, Mrs. James Arthur, Dr. W. G. Henry, Mrs. B. C. Whitney, Dr. C. G. Jennings, Dr. B. R. Shurly, Mrs. E. D. Stair, Mrs. Chas. F. Hammond, Raphael Herman, Henry Stephens, Miss Clara Dyar, Austin E. Wing, Dr. H. M. Rich, Frank B. Leland, Miss Mary Doyle. The meeting was an enthusiastic one and the reports showed a very satisfactory progress in the work. The sanatorium fund now amounts to over $22,000, and the association is meeting with a very cheerful and ready response for help. Offers have been made by individuals to erect several cottages. Immediately following a meeting of the new trustees was held, at which the following officers were chosen: President, Frank B. Leland; Vice-President, Dr. B. R. Shurly; Secretary, Dr. H. M. Rich; Treasurer, Austin E. Wing. The Executive Committee is composed of the officers and Dr. W. G. Henry.

It is said that many thousands of letters were received at the Dead Letter Office, because senders believed that the Red Cross stamps would take the place of regular postage stamps.

Dr. A. W. Abbott, of Ludington, is in California.

Dr. John H. Crosby, of Otsego, has returned from Berlin, where he spent several months in study.

The following members of the State Society have recently joined the American Medical Association: Drs. W. A. Campbell, Muskegon;

J. T. Cramer, Muskegon; L. L. Goodenow, Michigamme; J. B. Jackson, Kalamazoo; W. T. Wing, Allouez; J. W. McEwan, Detroit; G. G. Roberson, Utica; M. M. Wickware, Cass City; P. S. Wilson, Negaunee.

Recent registrations with the State Board of Examiners are: Charles R. Walsh, Detroit, Kentucky School of Medicine, 1908, by examination; Frank J. Maha, Traverse City, Bennett Medical College, 1900, reciprocity with Illinois; William G. Gardiner, Flint, University of Pennsylvania, 1906, reciprocity with Ohio; William H. Perry, Addison, Homeopathic Medical College of Missouri, 1898, reciprocity with Kansas; Robert A. Davis, Clinton, University of Illinois, 1906, reciprocity with Illinois; Afred M. Wheeler, Wakelee, Chicago College of Medicine and Surgery, 1909, reciprocity with Illinois; H. B. Weinburg, Kalamazoo, University of Illinois, 1909, reciprocity with Illinois; J. Martin Voorhees, Marshall, Long Island College Hospital, 1897, reciprocity with New York; Royal T. Farrand, Houghton, University of Michigan, 1892, reciprocity with Wisconsin.

At Bomget France, a city of 18,000 inhabitnats, the 14 physicians recently found that the sick benefit societies were greatly decreasing the professional income. The rates paid were twenty cents per visit, day or night. The physicians banded together and asked forty cents for an office consultation, and sixty cents for a residence call, with a twenty per cent discount if the bill was paid within a certain time. The societies were incensed and did all within their power to get new medical men to come to Bourge. The French medical journals are warning the profession "not to pick up the bone which the local physicians have found to be too bare."

Deaths

Neil McKinnon, M. D., a graduate of McGill University in 1895, died at his home in Alpena, December 12th.

Joseph James Moore, M. D., a well known member of the Oakland and Wayne County Medical Societies, died at Farmington on December 28th. Dr. Moore graduated at the University of Michigan in 1876.

Guy Melville Dunning, M. D., a prominent member of the Ingham County Medical Society, and a well-known specialist on the eye and ear, died of pneumonia, at Lansing, December 24th. Dr. Dunning was a graduate of the University of Michigan and was 40 years of age.

John W. Steffin, M. D., health officer of Cheboygan, died December 3rd, aged 52 years.

William J. McHench, M. D., of Brighton, died in Bradentown, Florida, where he had gone for his health, on January 1st. Dr. McHench graduated at the University of Michigan in 1858. He was an acting assistant surgeon in the Union army during the civil war, and for many years surgeon to the Pere Marquette Railway. He was 78 years of age.

Darius W. Loree, M. D., University of Michigan, 1860, died at Ridgeway, January 9th, from disease of the stomach, aged 76 years.

William H. Haze, M. D., of Lansing, died at his home January 21st. Dr. Haze was born in Port Hope, Canada, April 13, 1816, and in 1841 came to Oakland county, where he resided until 1862. For several years he was a circuit rider in the Methodist conference, preaching in both Wayne and Oakland counties. His medical education he received at an Ohio medical school, and for a number of years he practiced at Farmington. In 1857 he served in the legislature from that county and in 1862 he served one term as a representative from Ingham county. In 1865 he was elected by the Republicans of Lansing as mayor, and later represented the first ward as an alderman. Last summer he and his wife celebrated their sixty-ninth wedding anniversary, and when she passed away a few weeks ago the shock materially hastened his death.

Frank D. Summers, M. D., one of the best known physicians in Detroit, died from nephritis, at his home, January 20th. Dr. Summers graduated at the Detroit College of Medicine, in the class of 1883, and was in his 50th year.

Health officers in large cities are beginning to fall in the bad habit of ascribing most typhoid fever cases occurring in their municipality as being "contracted in the country."